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**Volume II**

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**EFFECT OF MULTIAXIAL LOADING  
ON CRACK GROWTH  
Volume II - Compilation of Experimental Data**

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*December 1978*

*FINAL REPORT*

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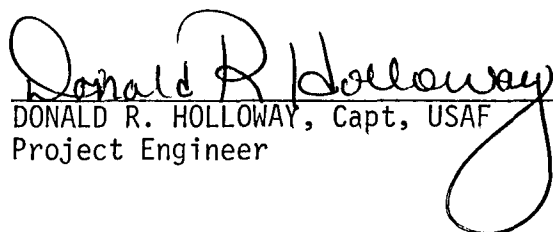
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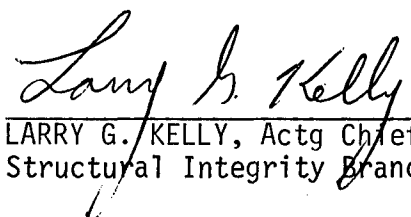
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) An exploratory research program has been conducted to systematically evaluate the effects of biaxial stress ratio on constant amplitude and variable amplitude fatigue crack growth rates.		

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A series of experiments and analyses have been carried out on the cyclic crack growth behavior of center-cracked cruciform specimens under various biaxial loading conditions. The results may be summarized as follows:

1. Crack will grow straight in a biaxial stress field when the stress component parallel to the crack is equal to or smaller than the stress component normal to the crack.
2. Elastic K factors are obtainable for both straight and curved cracks and are adequate for correlating the biaxial crack growth rate data.
3. At a given stress intensity level, the constant amplitude crack growth rates are the same in all the biaxial loading conditions.
4. In out-of-phase loading conditions, the crack growth rate and crack growth directions are the same as those in the in-phase loading condition.
5. Crack tip plastic zone size variations with biaxial ratio appeared to have no effect on constant amplitude crack growth rate.
6. As for the variable amplitude tests, it is very evident that cracks grow faster at positive biaxial stress states but slower at negative biaxial loading conditions.

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## FOREWORD

This report describes results of work performed by the Northrop Corporation, Aircraft Group, Hawthorne, California, under Air Force Contract F33615-76-C-3121, "Effect of Multiaxial Loading on Crack Growth," Project 486U, "Advanced Metallic Structures - Advanced Development Program," Task 486U02, work unit 486U0224. The effort was sponsored by the Air Force Flight Dynamics Laboratory, Air Force Wright Aeronautical Laboratories, Air Force Systems Command, Wright-Patterson Air Force Base, Ohio. Captains John E. Allison and Donald R. Holloway of the AFFDL/FBE were the Air Force Project Engineers.

The program was performed by the Structures Research Department of Northrop Corporation, Aircraft Group, under the overall supervision of L. L. Jeans, Manager, Structural Life Assurance Research. Mr. A. F. Liu was the Northrop Program Manager and Principal Investigator. He was assisted by D. F. Dittmer on experimental tasks; J. R. Yamane, Dr. J. P. Buban, and Dr. H. P. Kan on analytical tasks. Dr. M. M. Ratwani provided guidance on cracked finite element analysis.

This report covers work accomplished during the period September 1976 through September 1978. This report consists of three volumes.

Volume I	Technical Summary
Volume II	Compilation of Experimental Data
Volume III	Compilation of Interferometry Photographs

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# LIST OF SYMBOLS

a	One half of the total crack length, or the distance between a point on the X-axis to the center of the cruciform specimen, inches
$a_{eff}$	Effective crack length per equation 10 of ASTM E561, inches
B	Biaxial ratio, $\sigma_x/\sigma_y$ , or block of a loads spectrum, or thickness of the specimen, inch
DA/DB	Crack growth rate, inch/block
DA/DN	Crack growth rate, inch/cycle
E	Young's modulus, ksi
f	Cyclic frequency, Hz
$K_{eff}$	Effective stress intensity, a function of $a_{eff}$ , ksi $\sqrt{\text{inch}}$
$K_{max}$	Stress intensity corresponding to $\sigma_{max}$ , ksi $\sqrt{\text{inch}}$
$P_x$	Load applied to X-axis of a cruciform specimen, always parallel to the crack, kip
$P_y$	Load applied to Y-axis of a cruciform specimen, always perpendicular to the crack, kip
R	Cyclic stress ratio, $\sigma_{y, min}/\sigma_{y max}$
W	Width of a center cracked specimen, inches
$\sigma_x$	Stress parallel to the crack, tension or compression, ksi
$\sigma_y$	Stress perpendicular to the crack, always in tension, ksi
$\omega t$	Phase angle for cyclic loading, degrees



## SECTION I

### COMPILATION OF EXPERIMENTAL DATA

This report is the second volume of the subject technical report. All the experimental data generated in the subject research program are compiled herein and presented in the following order.

1. Stress distributions in two cruciforms specimens (without crack), pages 2 to 42.
2. Stress distributions in two cruciform specimens (with crack), pages 43 and 44.
3. Tabulation of the testing conditions for 118 specimens, pages 45 to 52.
4. The crack length versus cycles record,  $da/dN$  versus  $K_{max}$  curve, and the crack growth profile for 113 specimens, pages 53 to 570.
5. Load versus crack length records and the crack growth resistance curve for 5 specimens, pages 571 to 583.
6. Tensile test records for 36 specimens, pages 584 to 623.

The specimen materials were either 7075-T7351 or 2024-T351 aluminum alloys. In Figures 1 through 53 the data points were determined by strain gauge (rosette) measurements and the line drawn through the data points were actually, independently, determined by finite elements (NASTRAN) analysis.

Rosette No. 6, Y-axis = 55 KIP

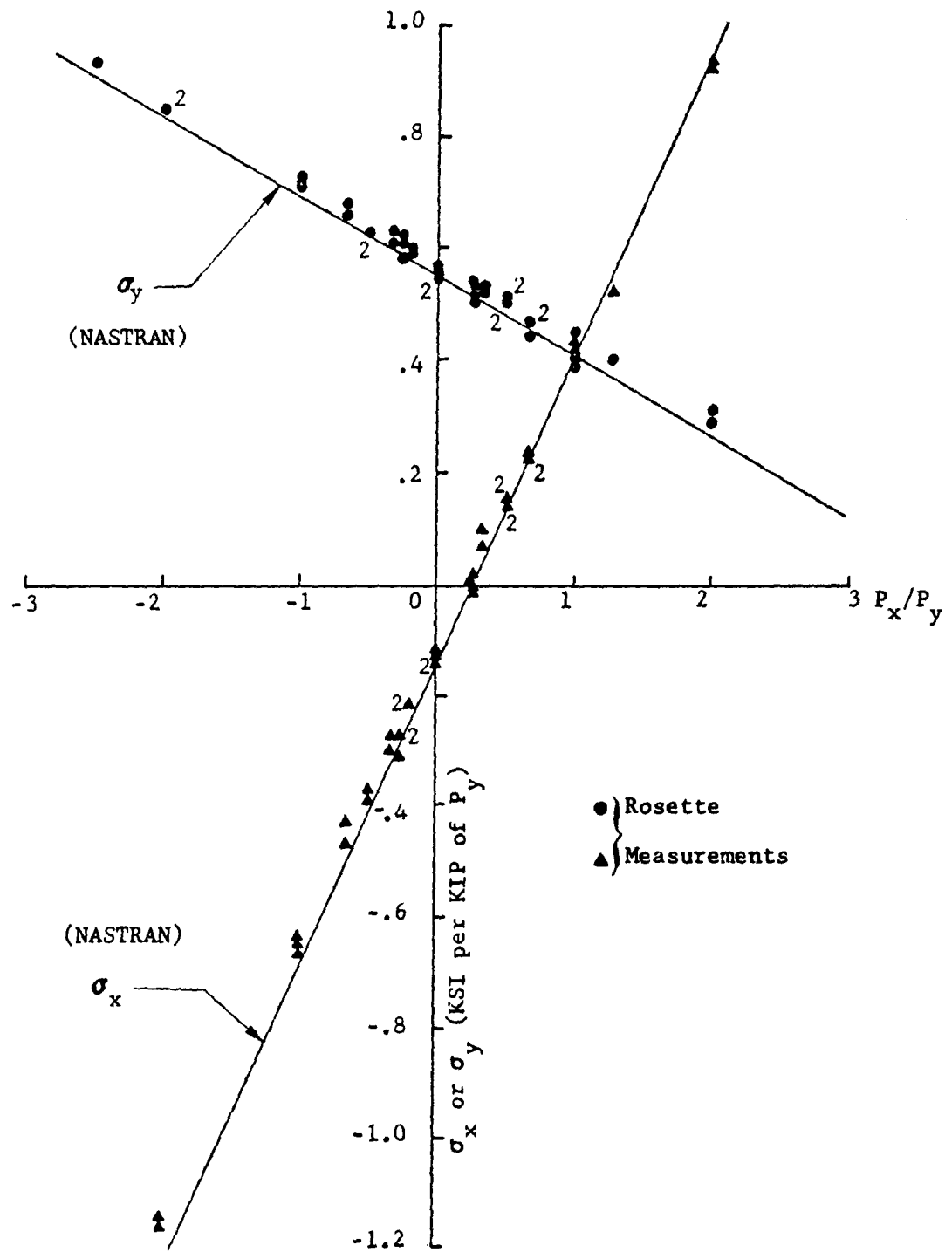


Figure 1 Stresses in the Center of the 7075-T7351 Cruciform Specimen

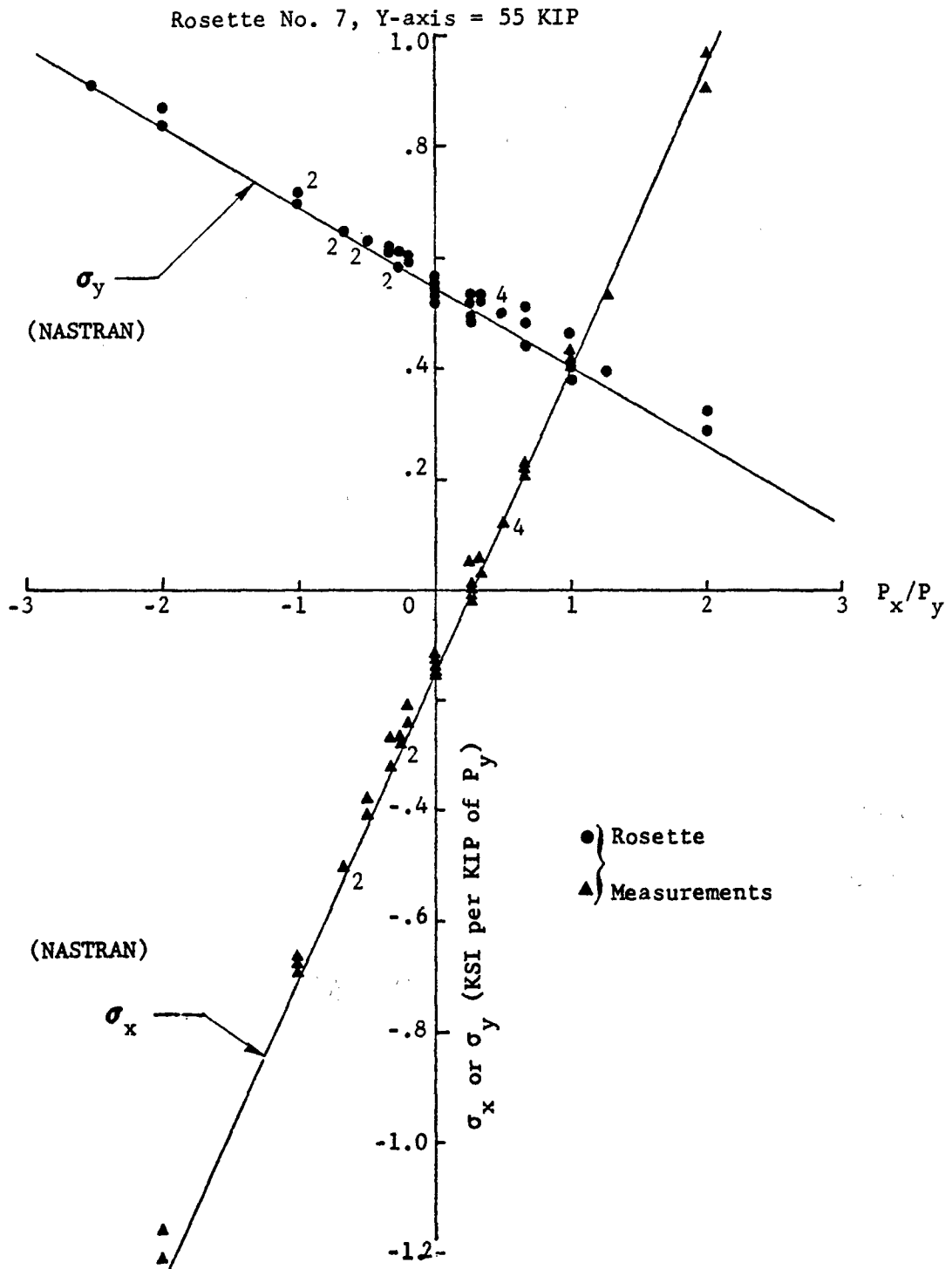


Figure 2 Stresses in the Center of the 7075-T7351 Cruciform Specimen

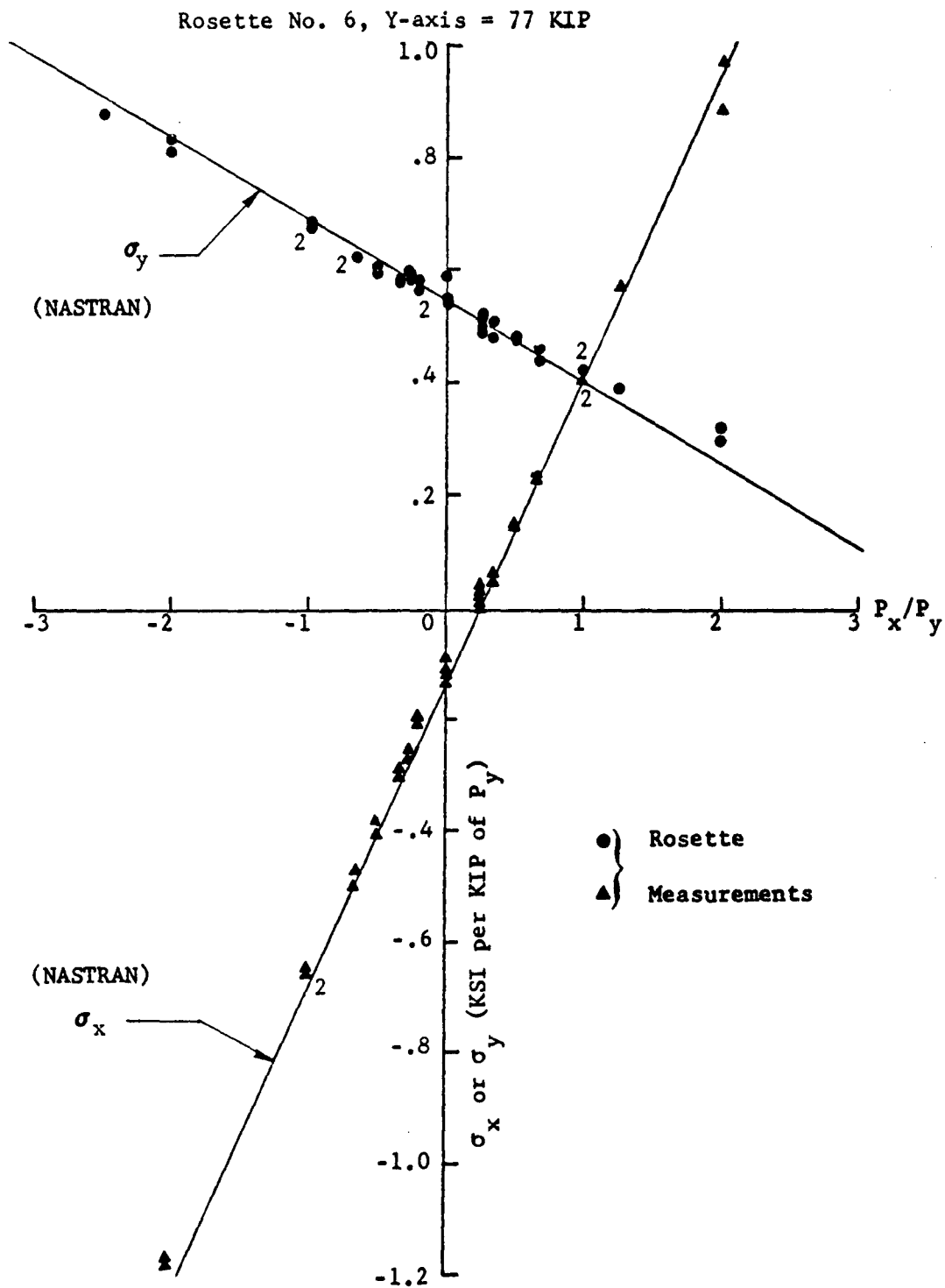
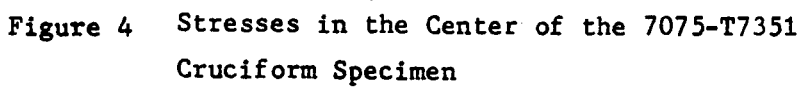


Figure 3 Stresses in the Center of the 7075-T7351 Cruciform Specimen



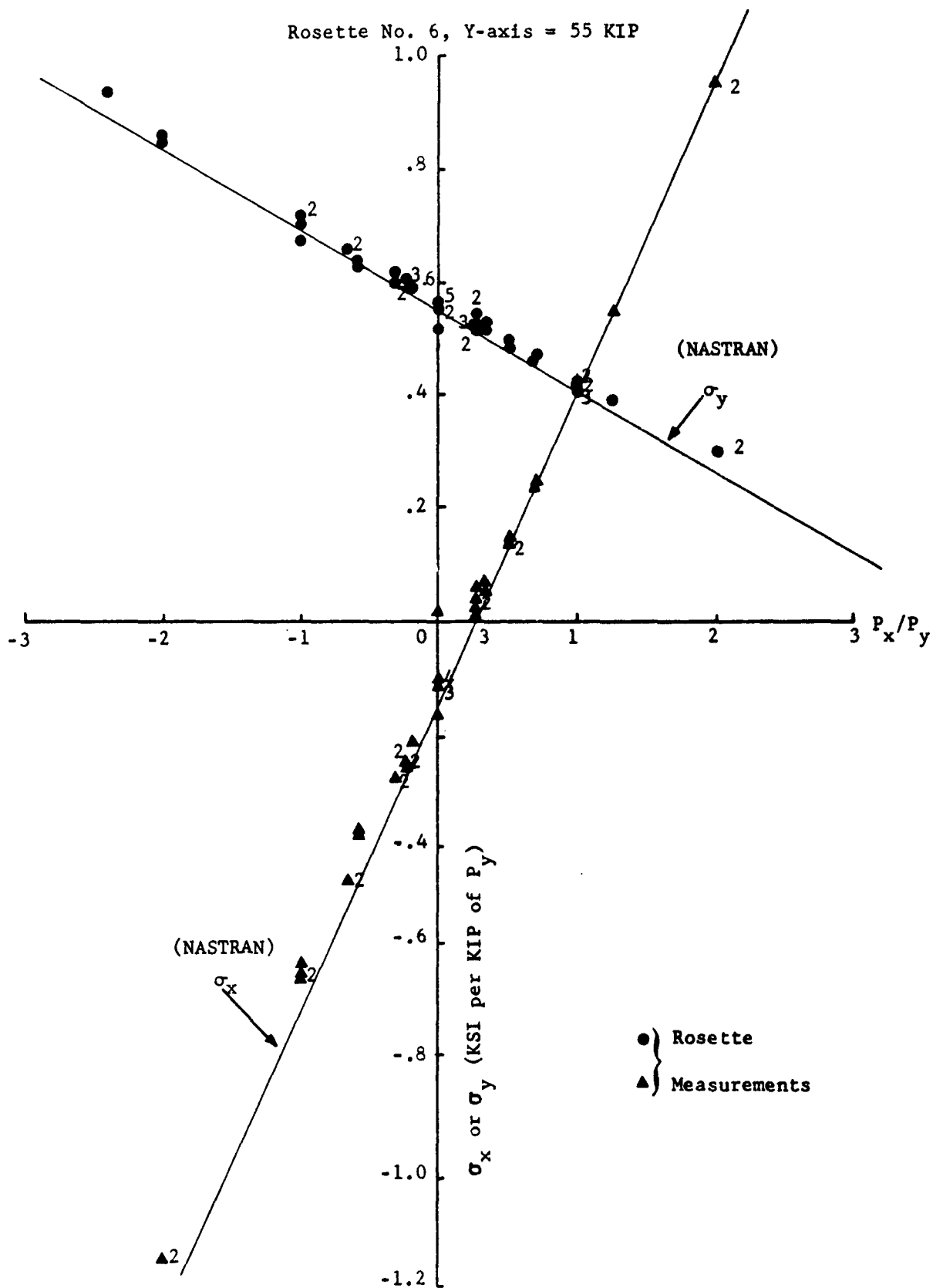


Figure 5 Stresses in the Center of the 2024-T351 Cruciform Specimen

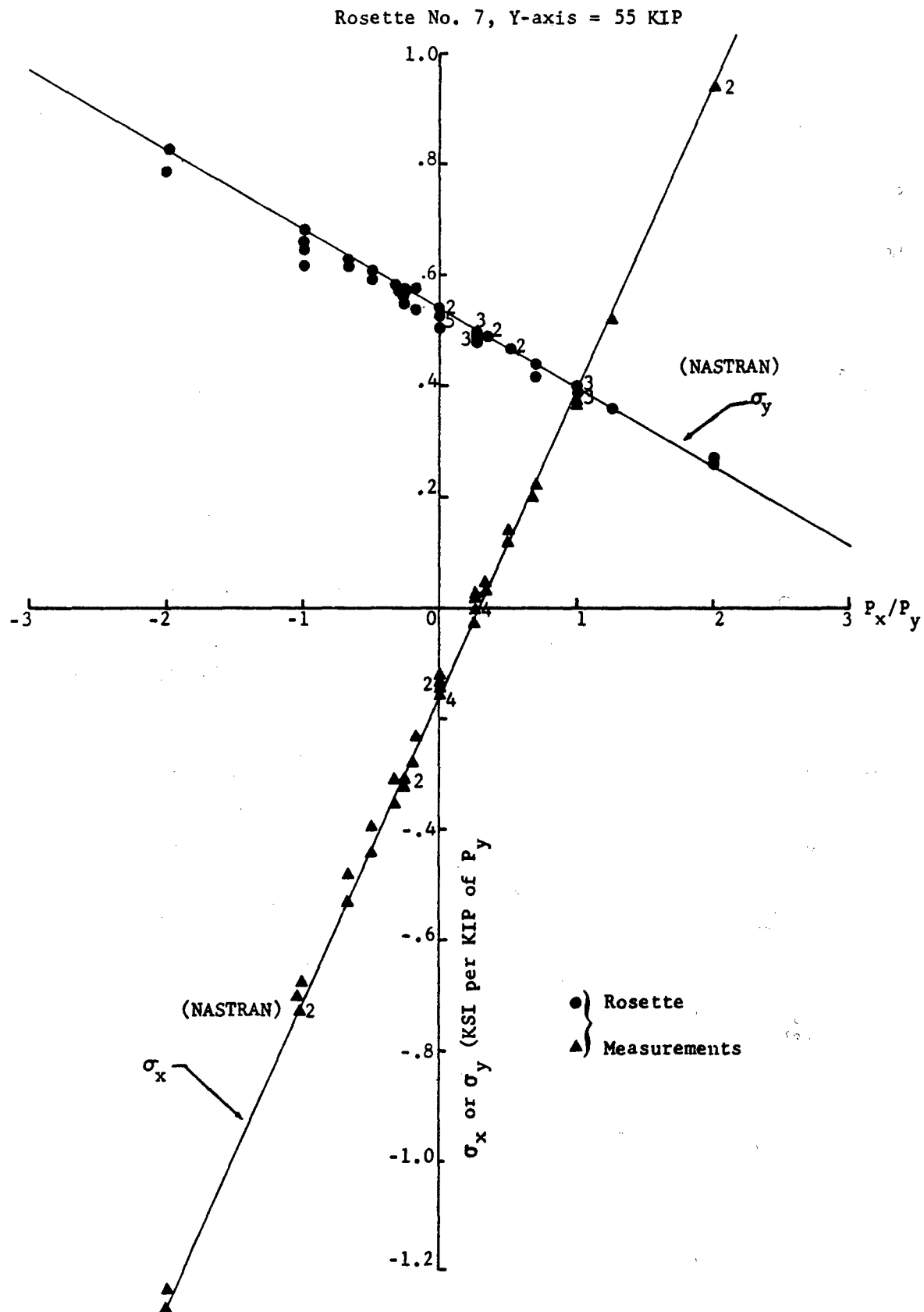


Figure 6 Stresses in the Center of the 2024-T351 Cruciform Specimen

Rosette No. 6, Y-axis = 77 KIP

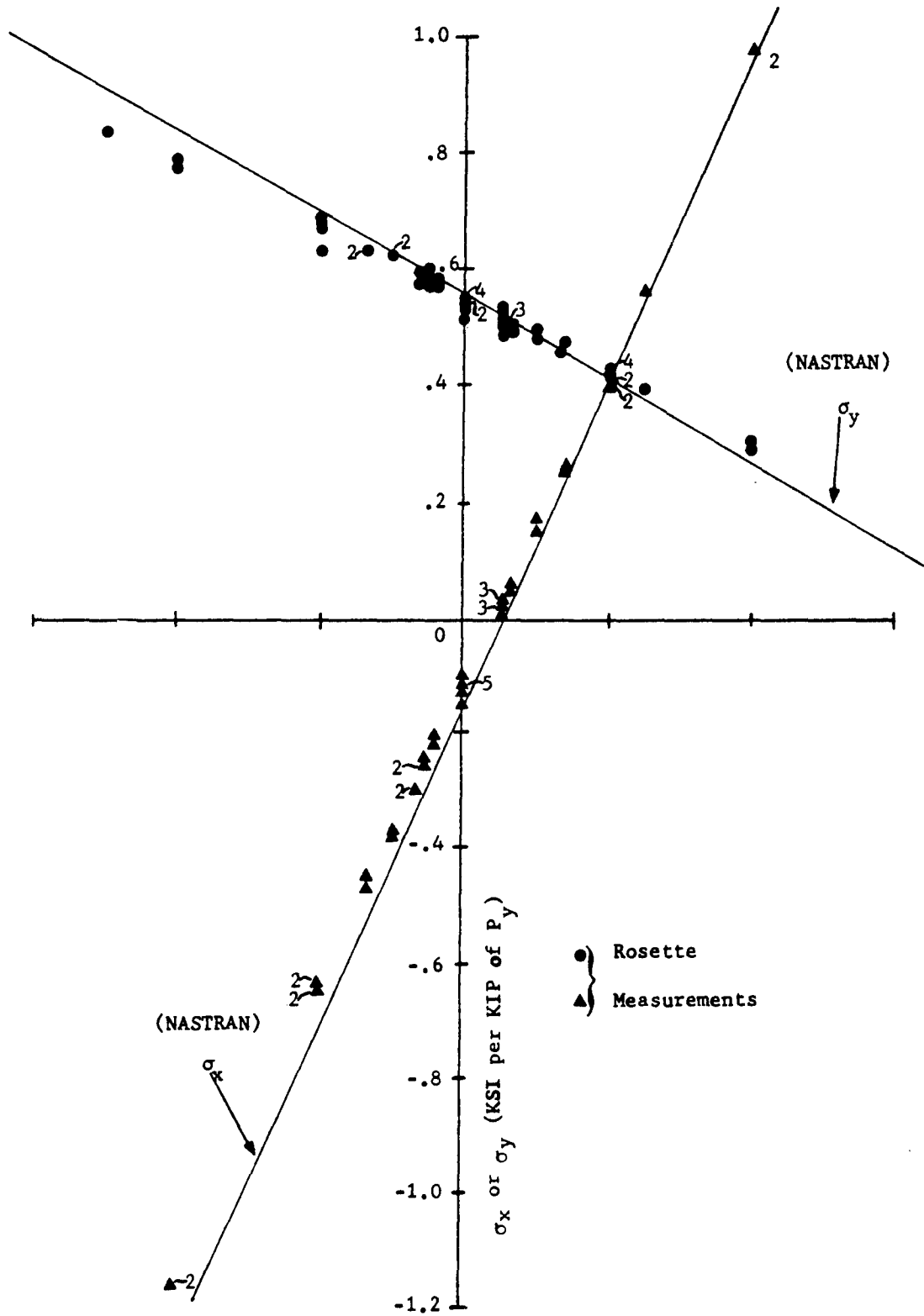


Figure 7 Stresses in the Center of the 2024-T351 Cruciform Specimen



Rosette No. 7, Y-axis = 77 KIP

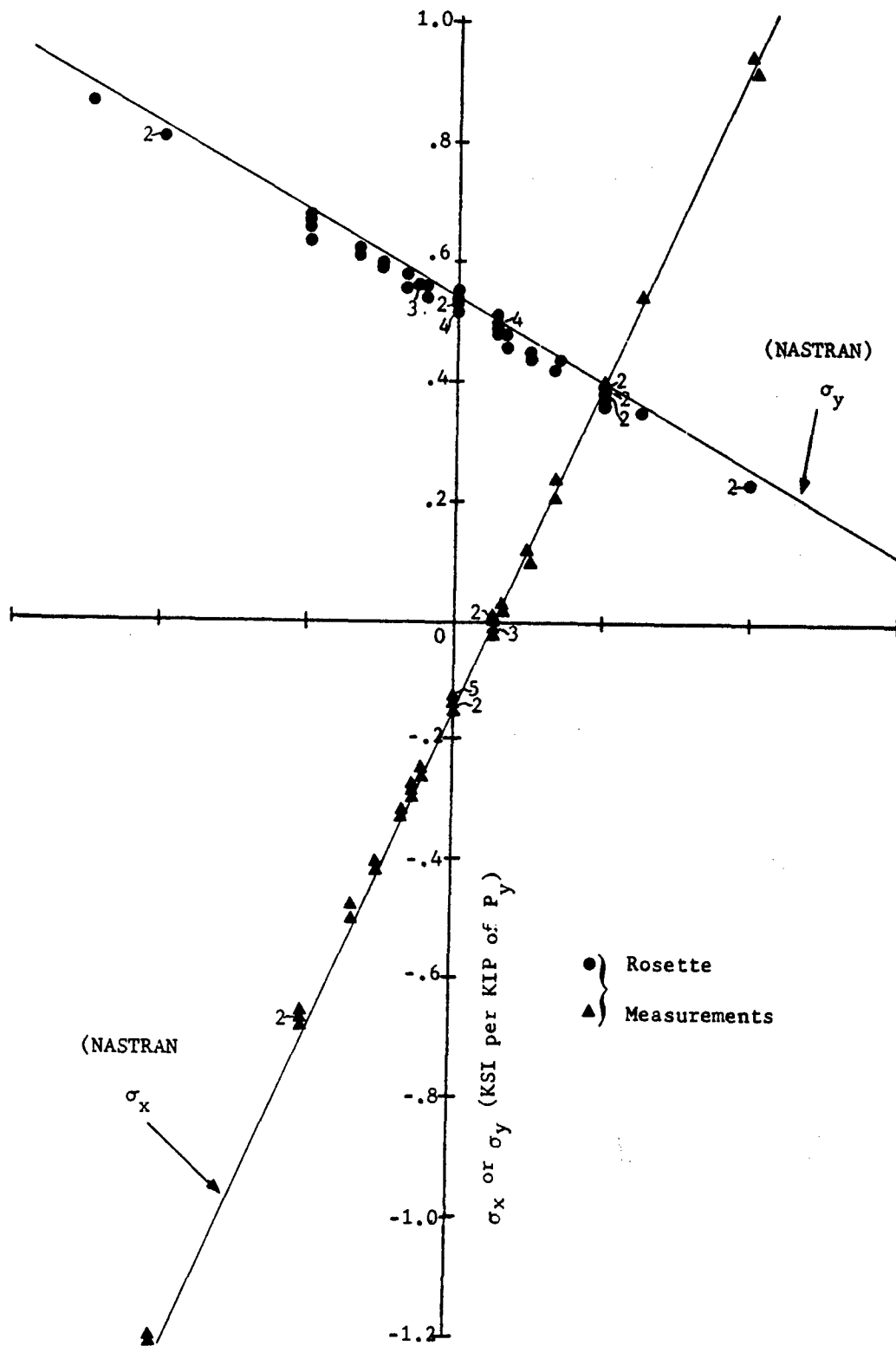


Figure 8 Stresses in the Center of the 2024-T351 Cruciform Specimen

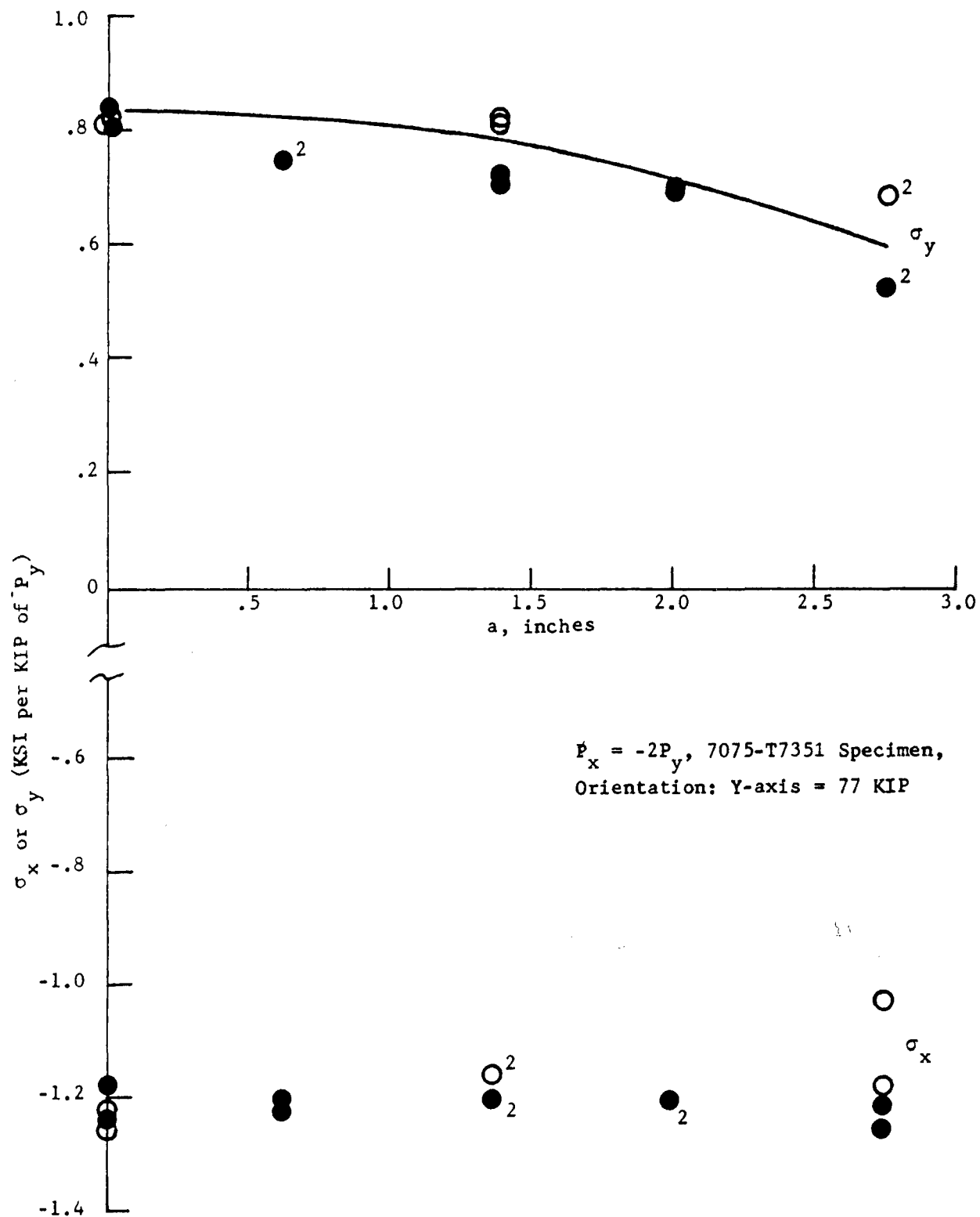


Figure 9 Stress Distribution along the X-axis of the Cruciform Specimen

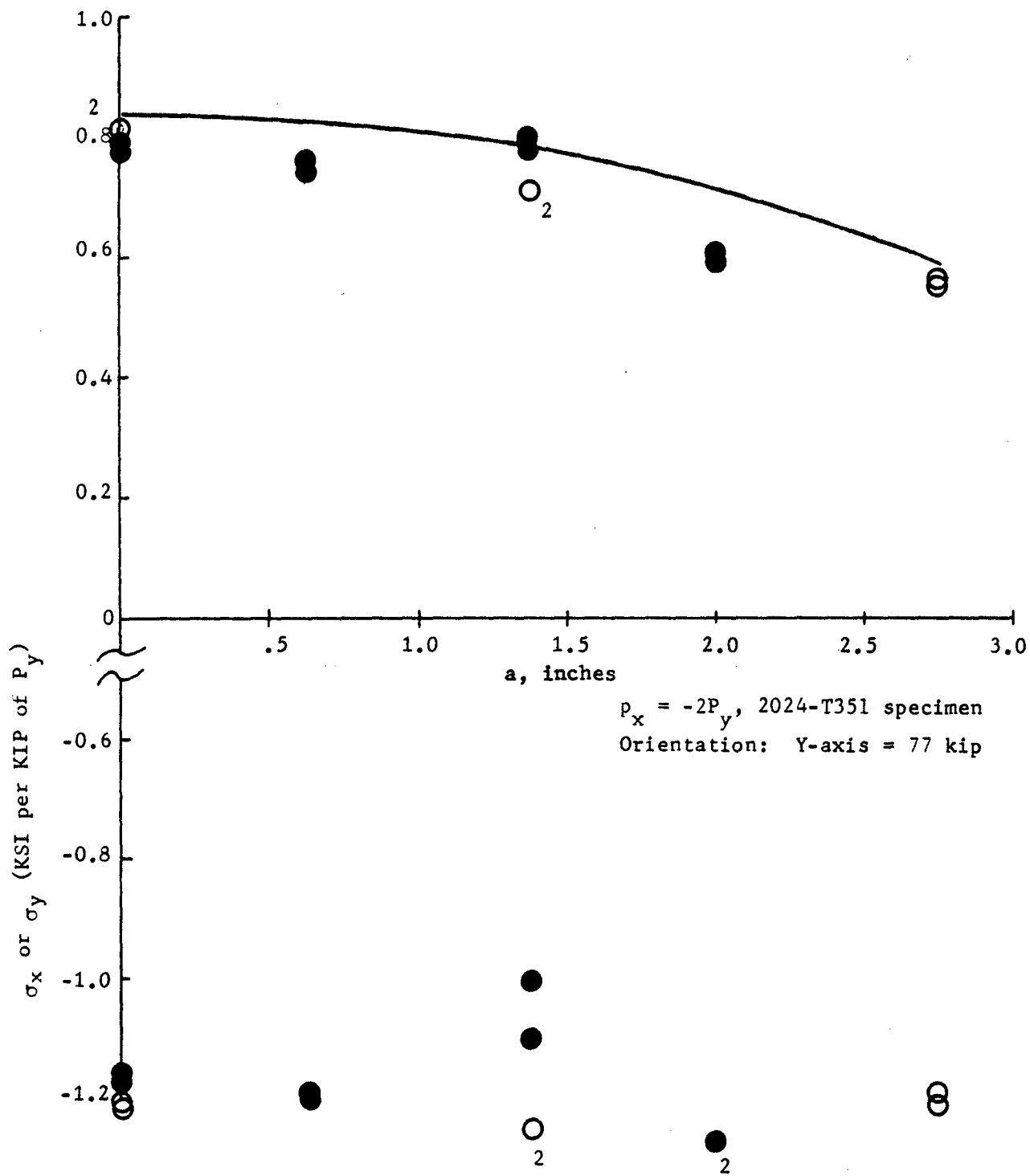


Figure 10 Stress Distribution along the X-axis of the Cruciform Specimen

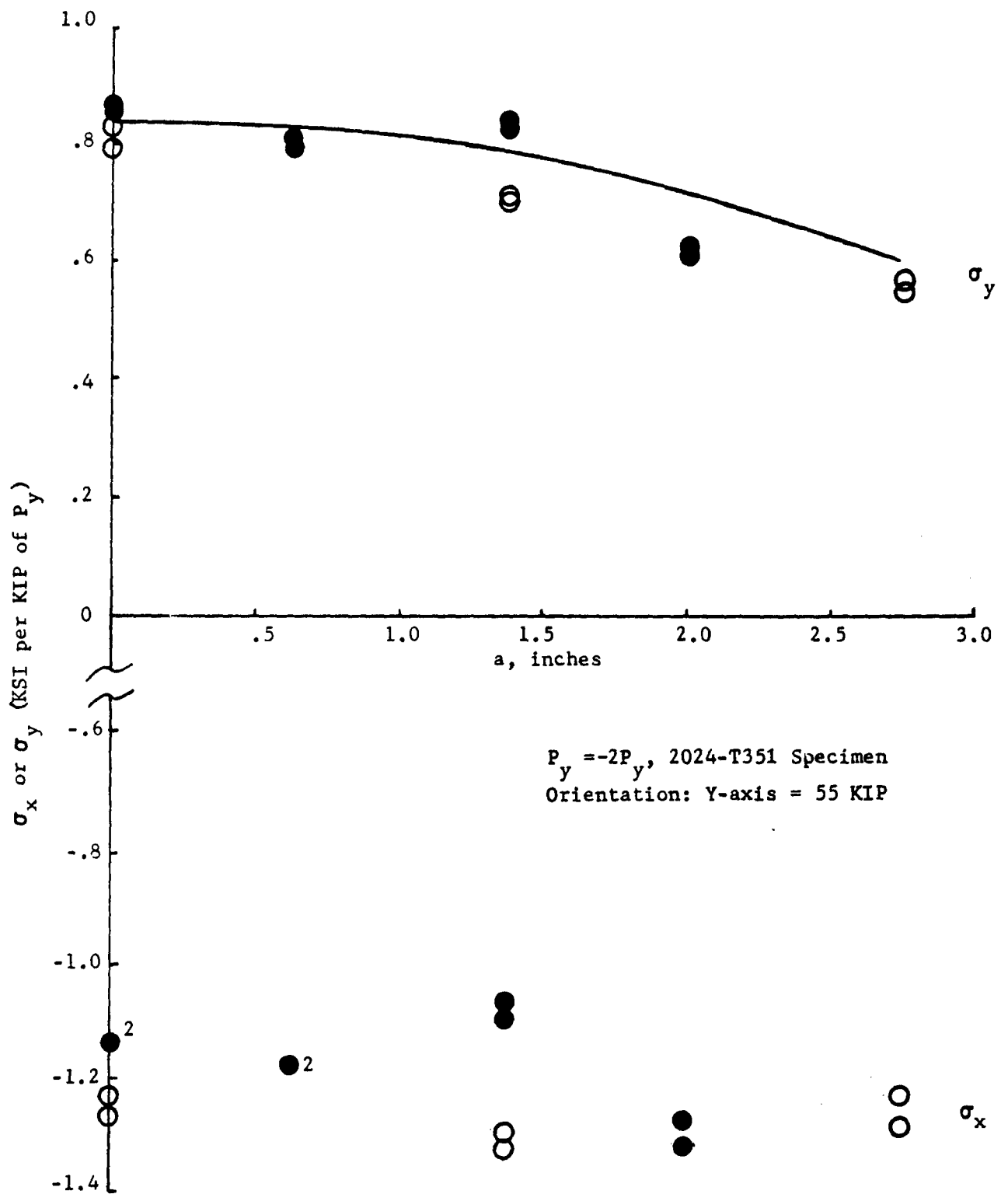


Figure 11 Stress Distribution along the X-axis of the Cruciform Specimen

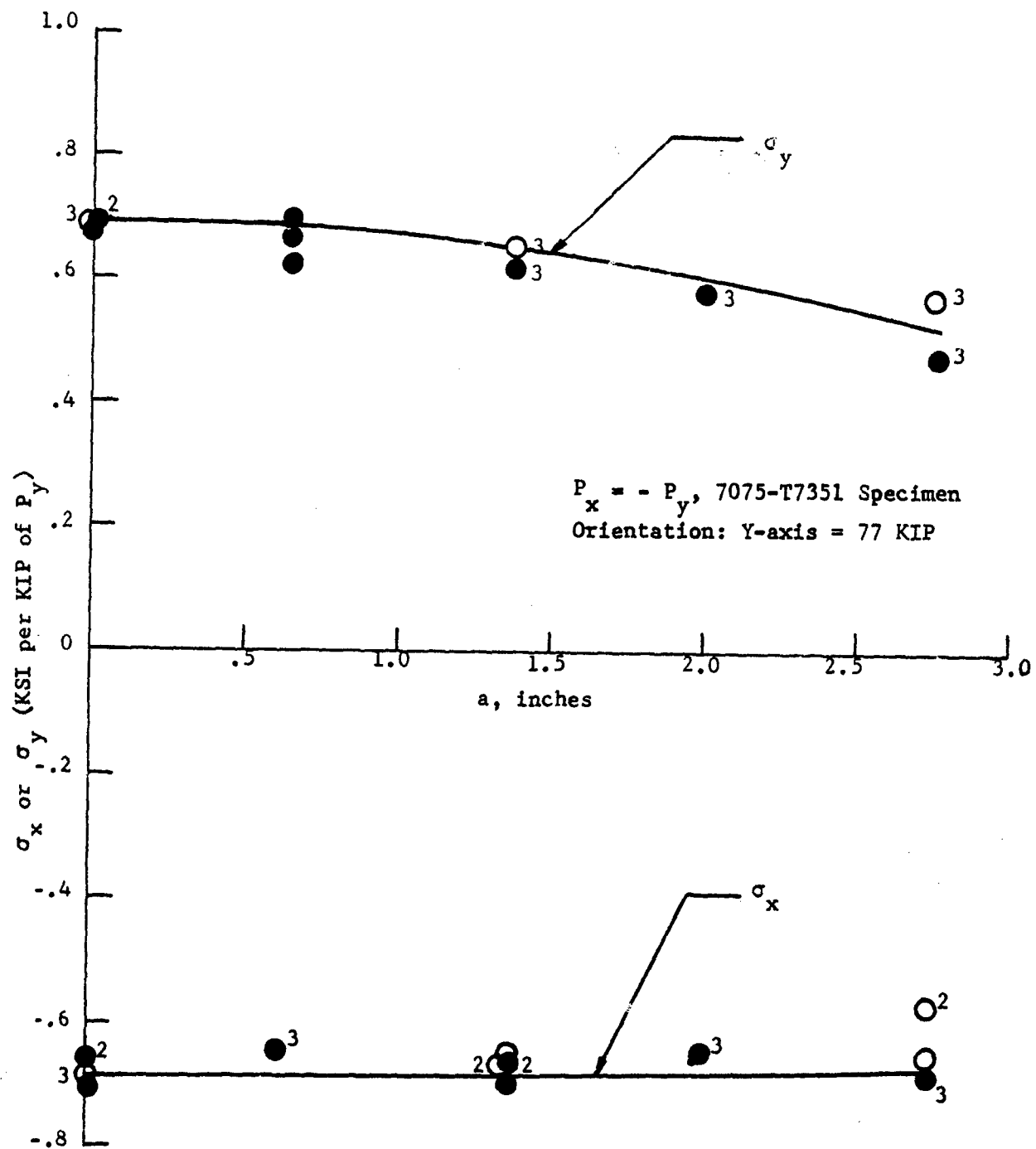


Figure 12 Stress Distribution along the X-axis of the Cruciform Specimen

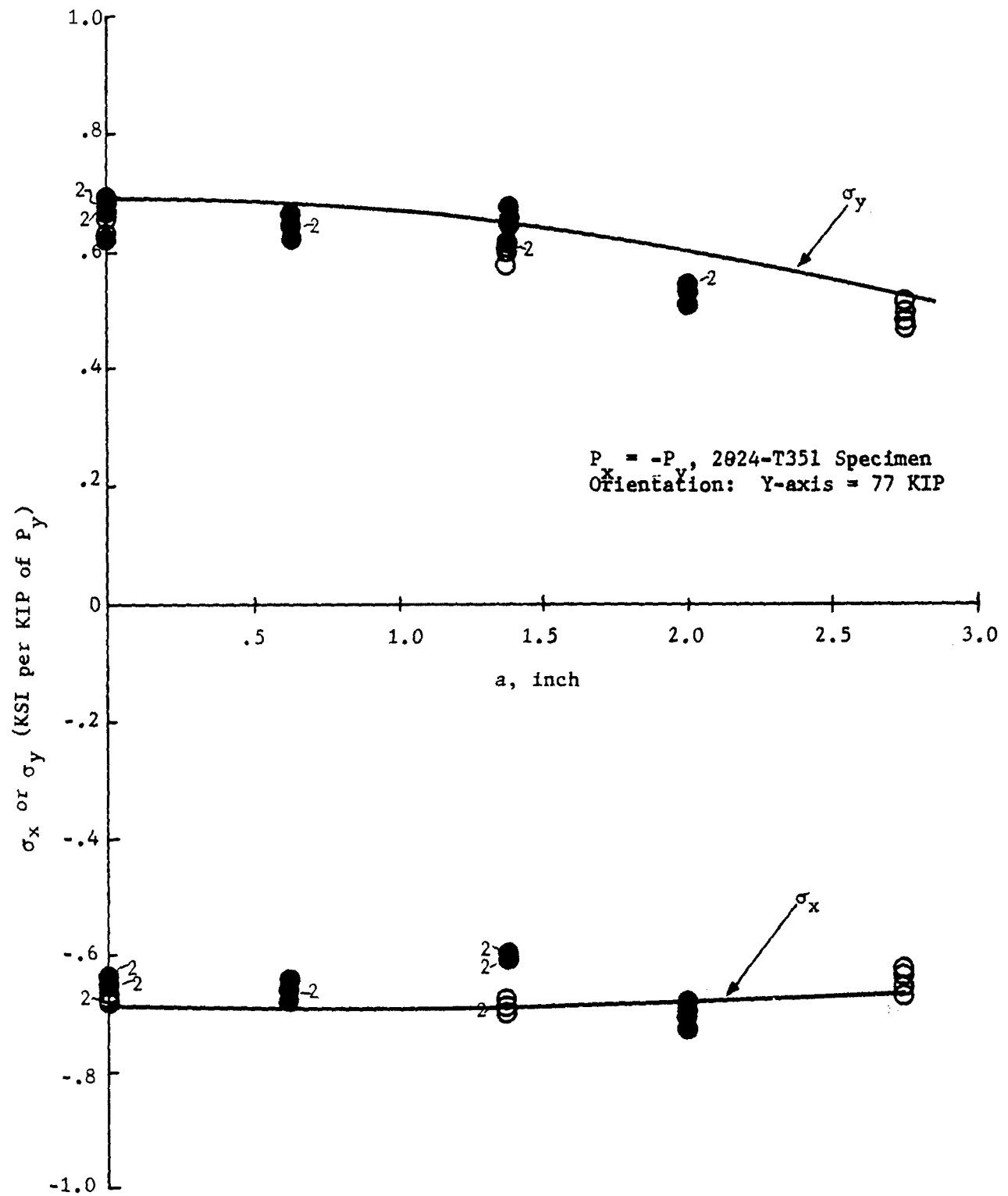


Figure 13 Stress Distribution along the X-axis of the Cruciform Specimen

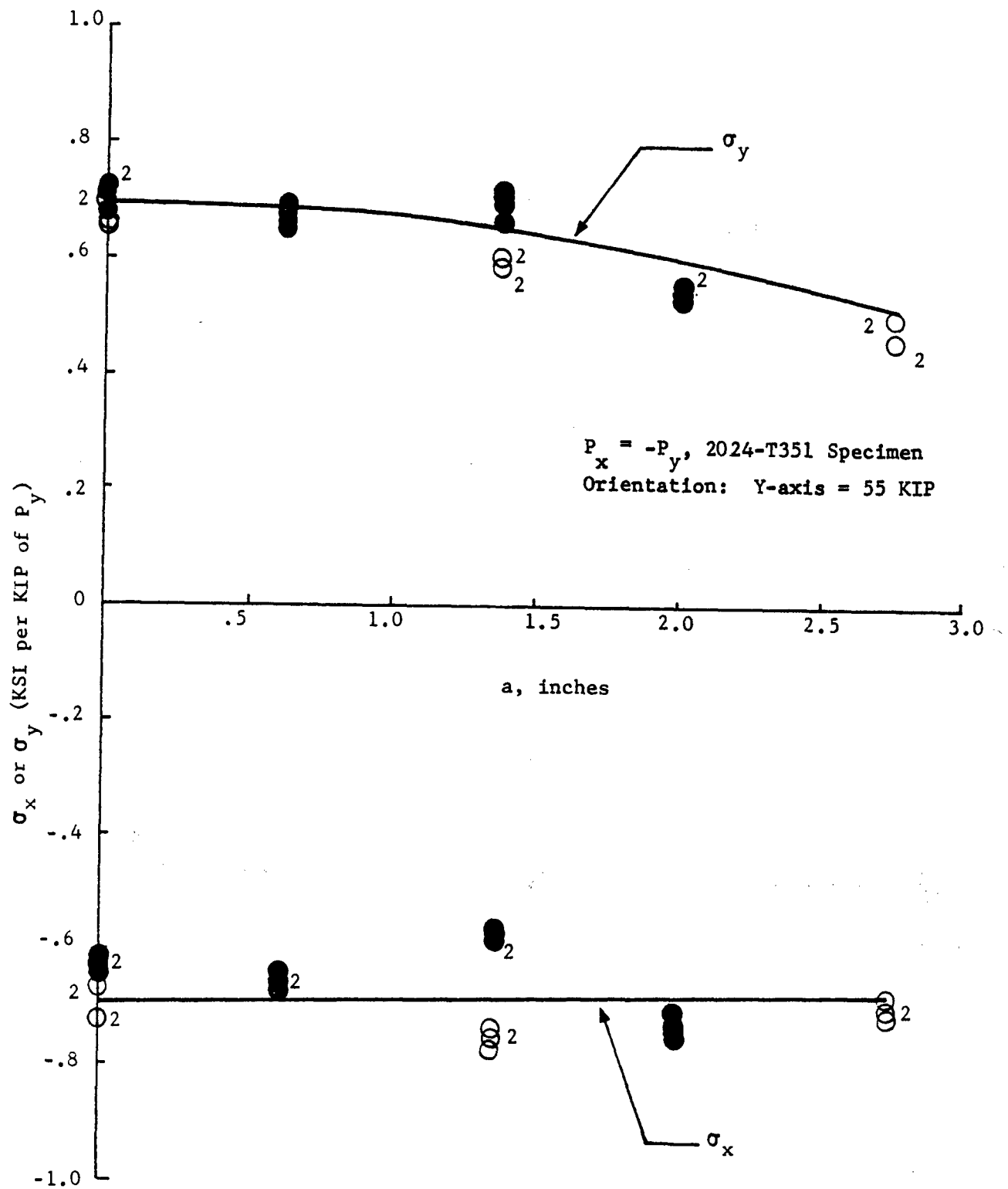


Figure 14 Stress Distribution along the X-axis of the Cruciform Specimen

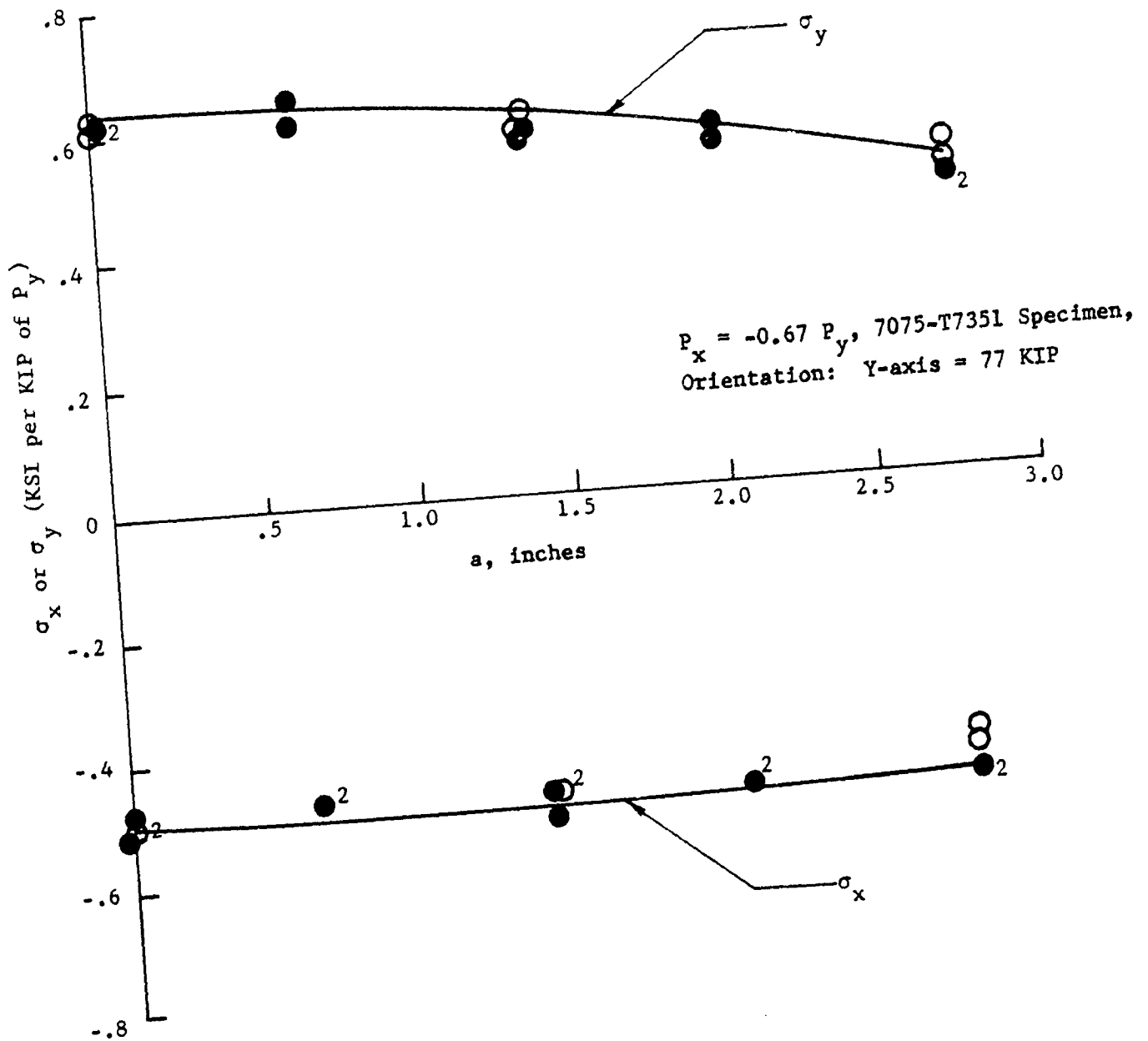


Figure 15 Stress Distribution along the X-axis of the Cruciform Specimen



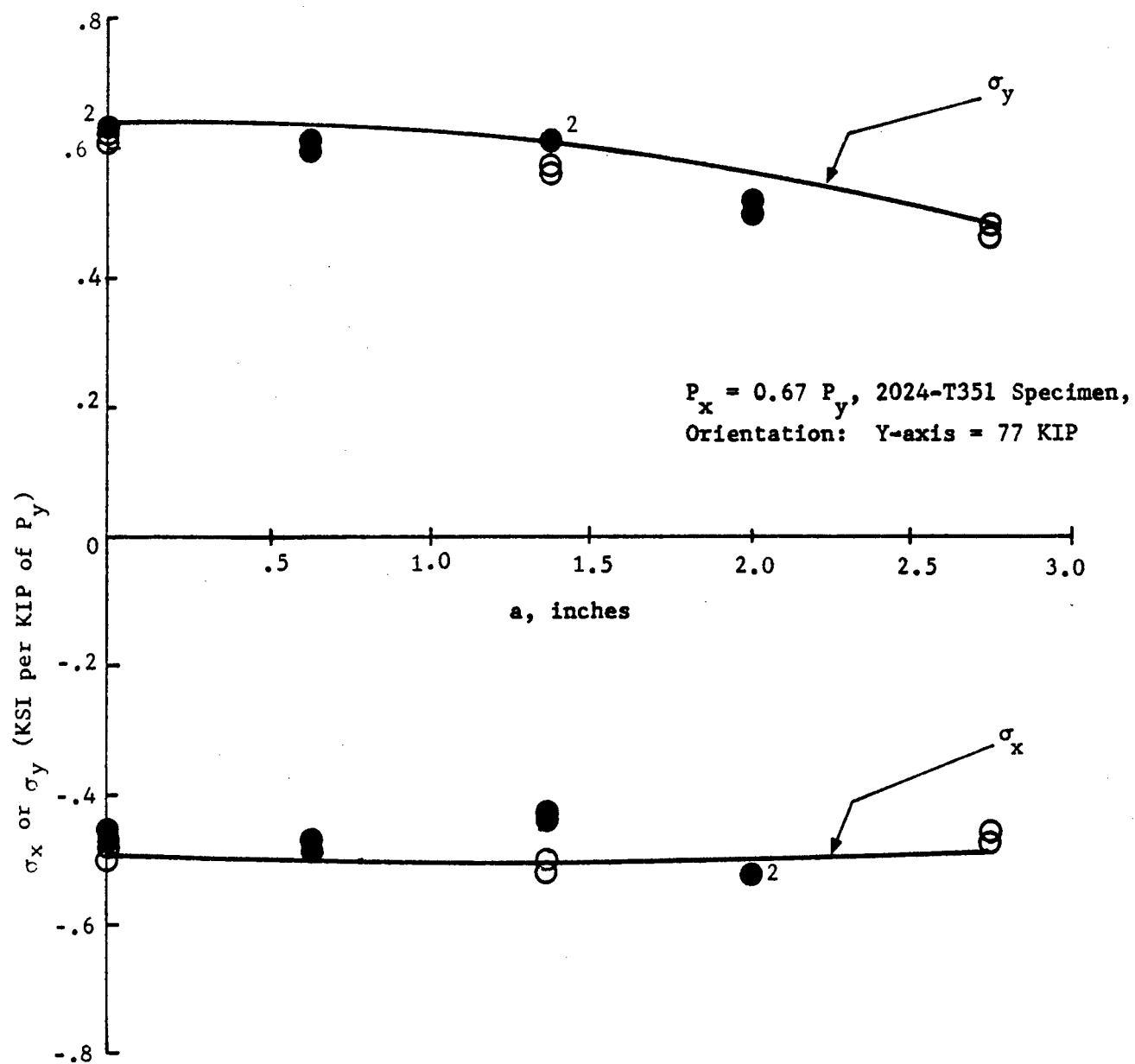


Figure 16 Stress Distribution along the X-axis of the Cruciform Specimen

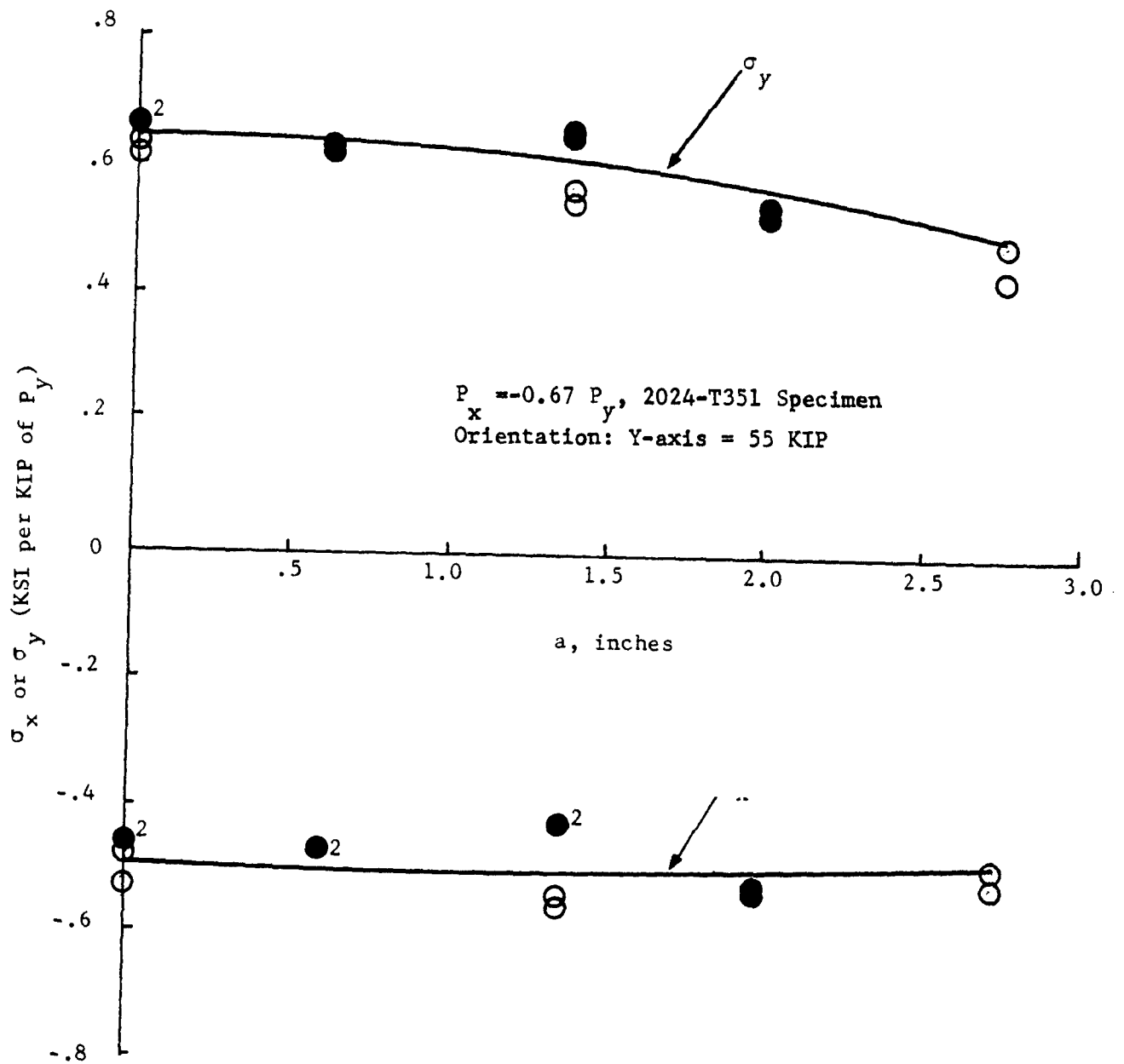


Figure 17 Stress Distribution along the X-axis of the Cruciform Specimen

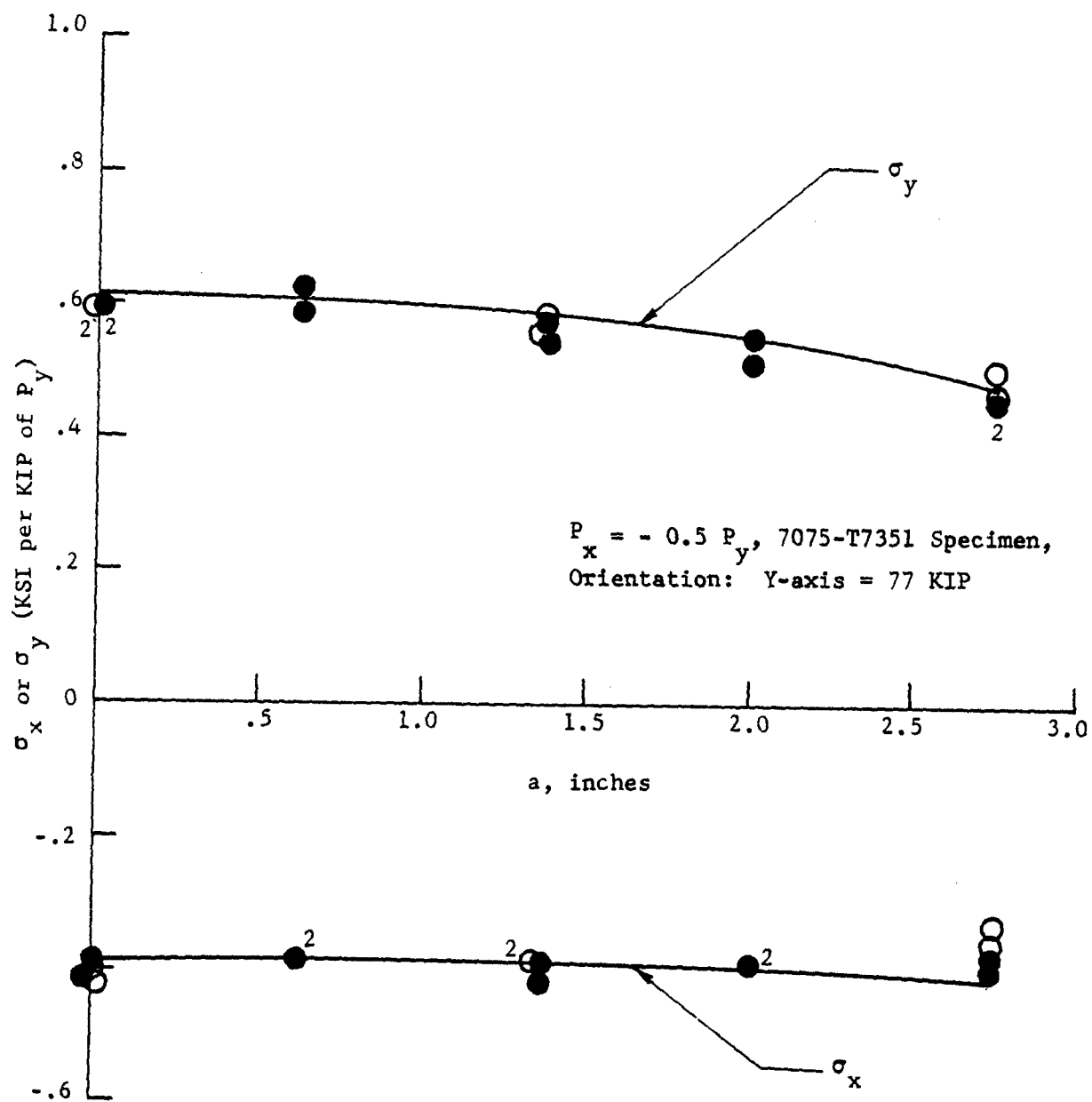


Figure 18 Stress Distribution along the X-axis  
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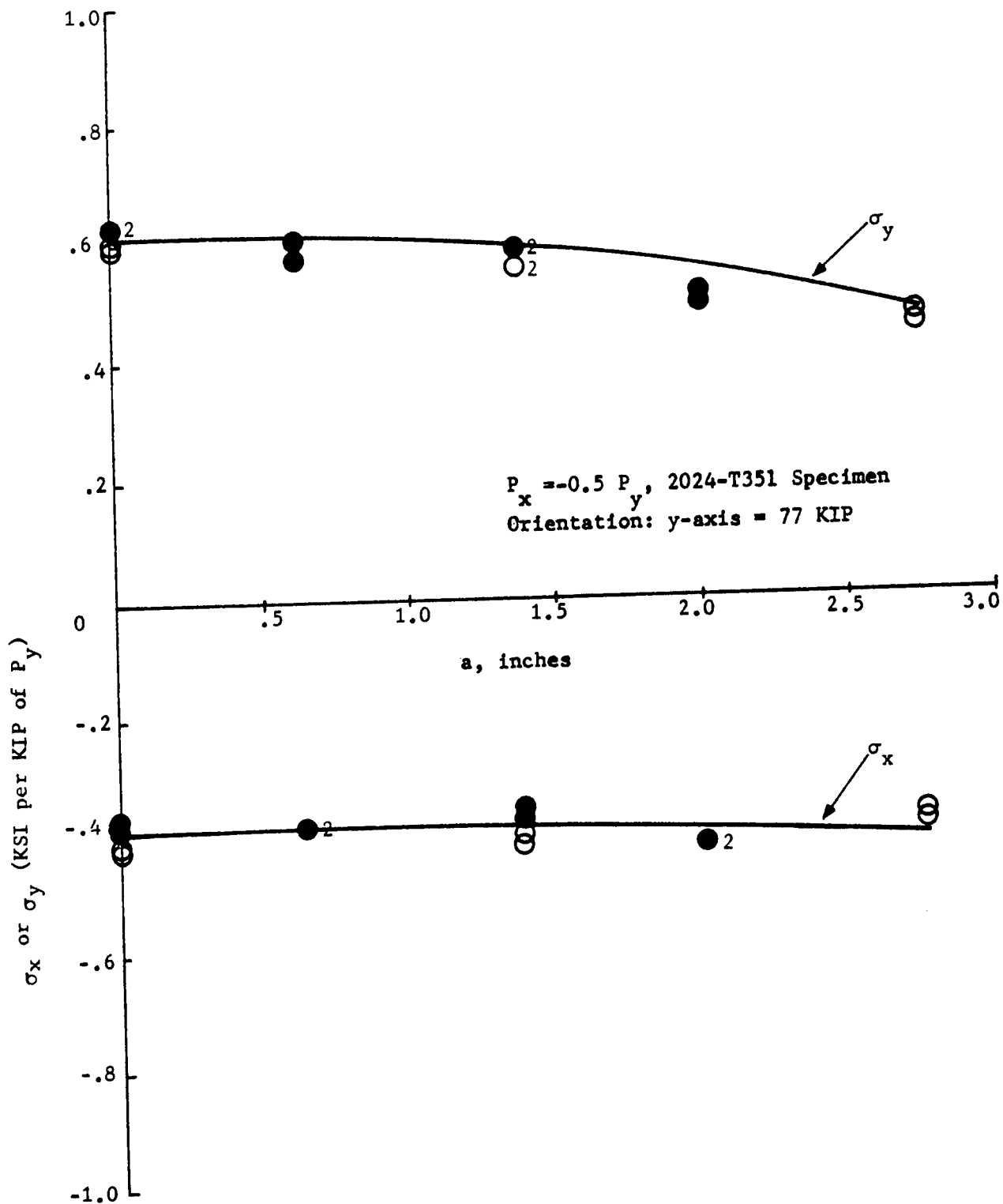


Figure 19 Stress Distribution along the X-axis of the Cruciform Specimen

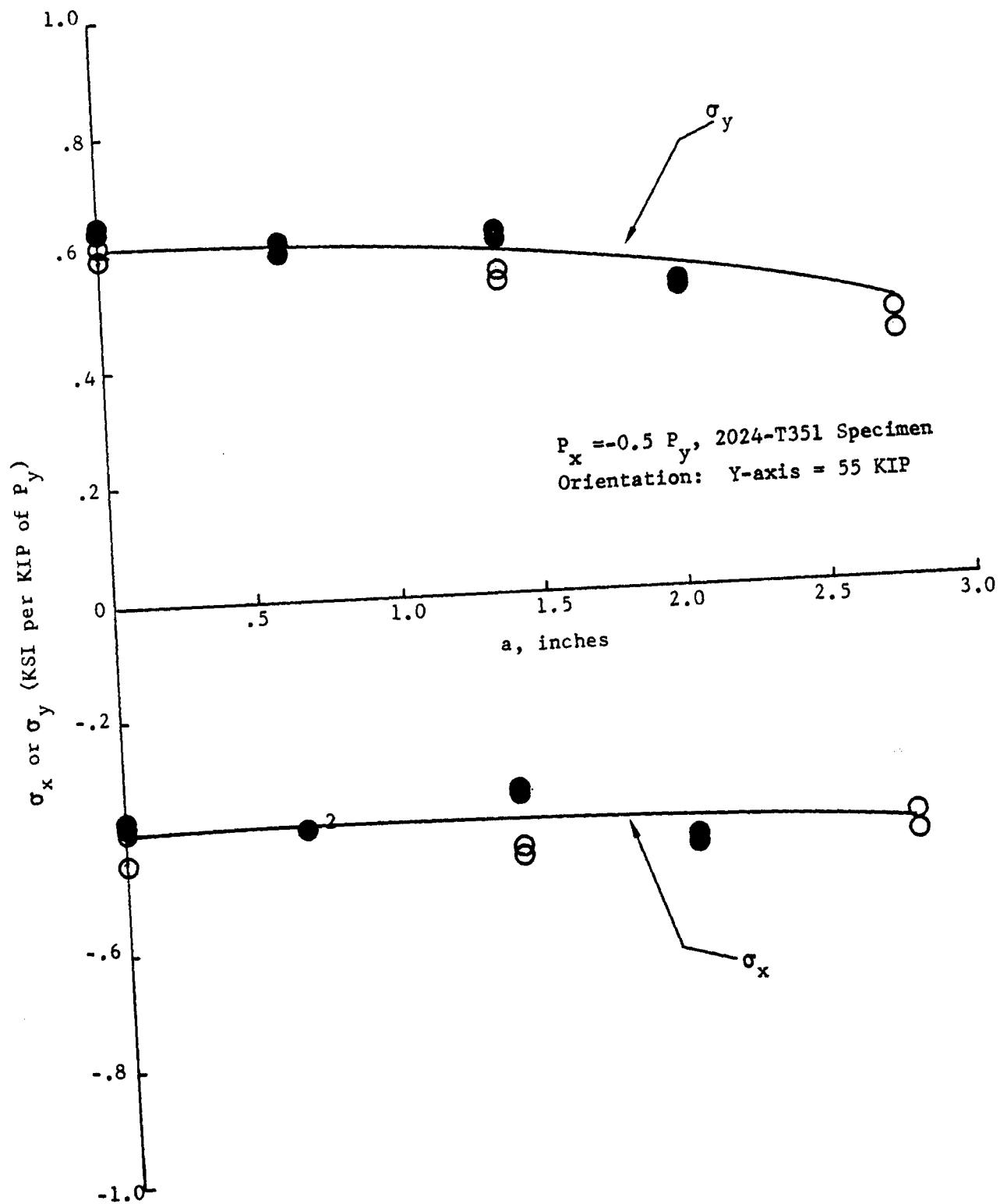


Figure 20 Stress Distribution along the X-axis of the Cruciform Specimen

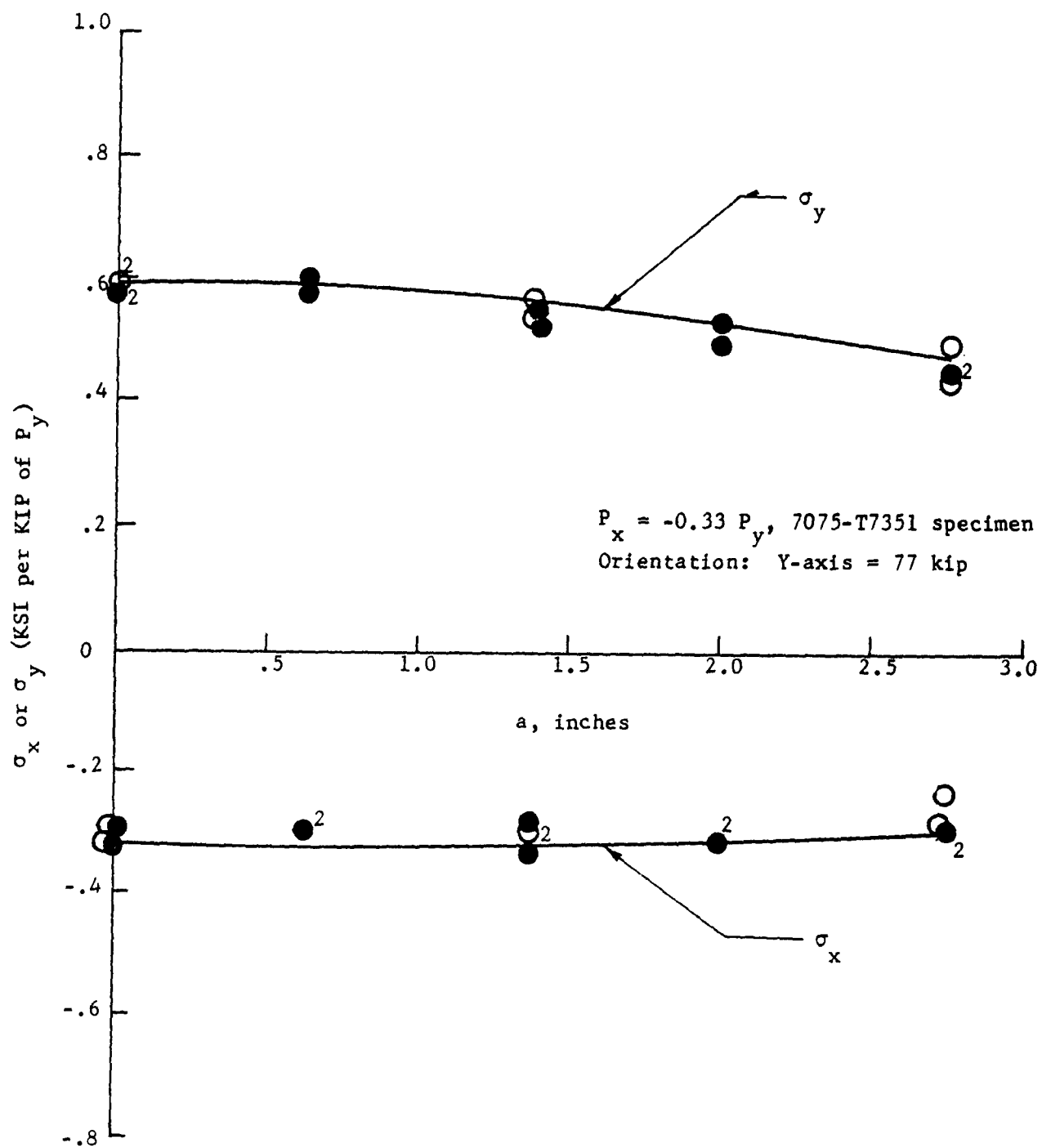
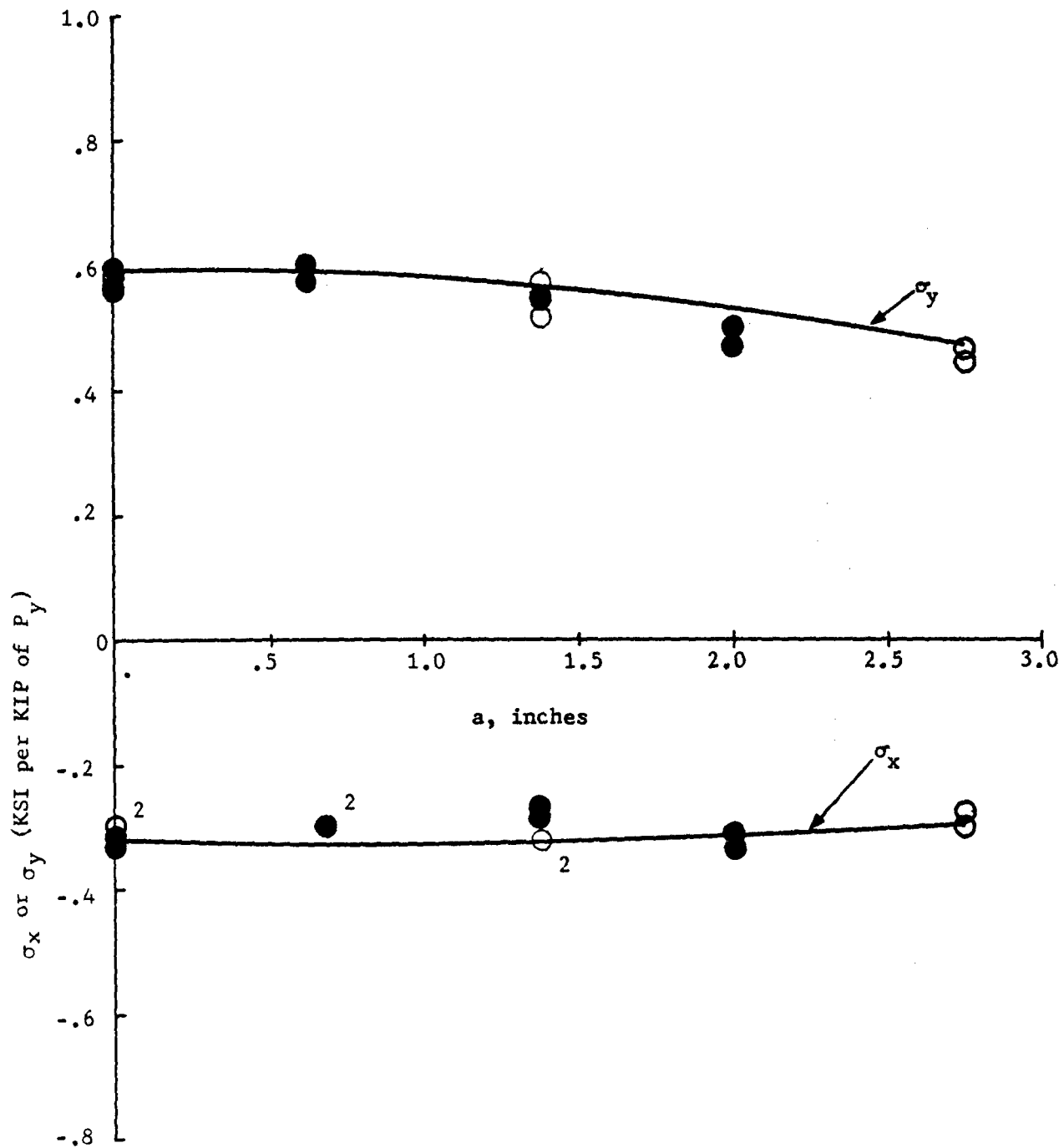


Figure 21 Stress Distribution along the X-axis of the Cruciform Specimen



$P_x = -0.33 P_y$ , 2024-T351 Specimen  
 Orientation: Y-axis = 77 KIP

Figure 22 Stress Distribution along the X-axis  
 of the Cruciform Specimen

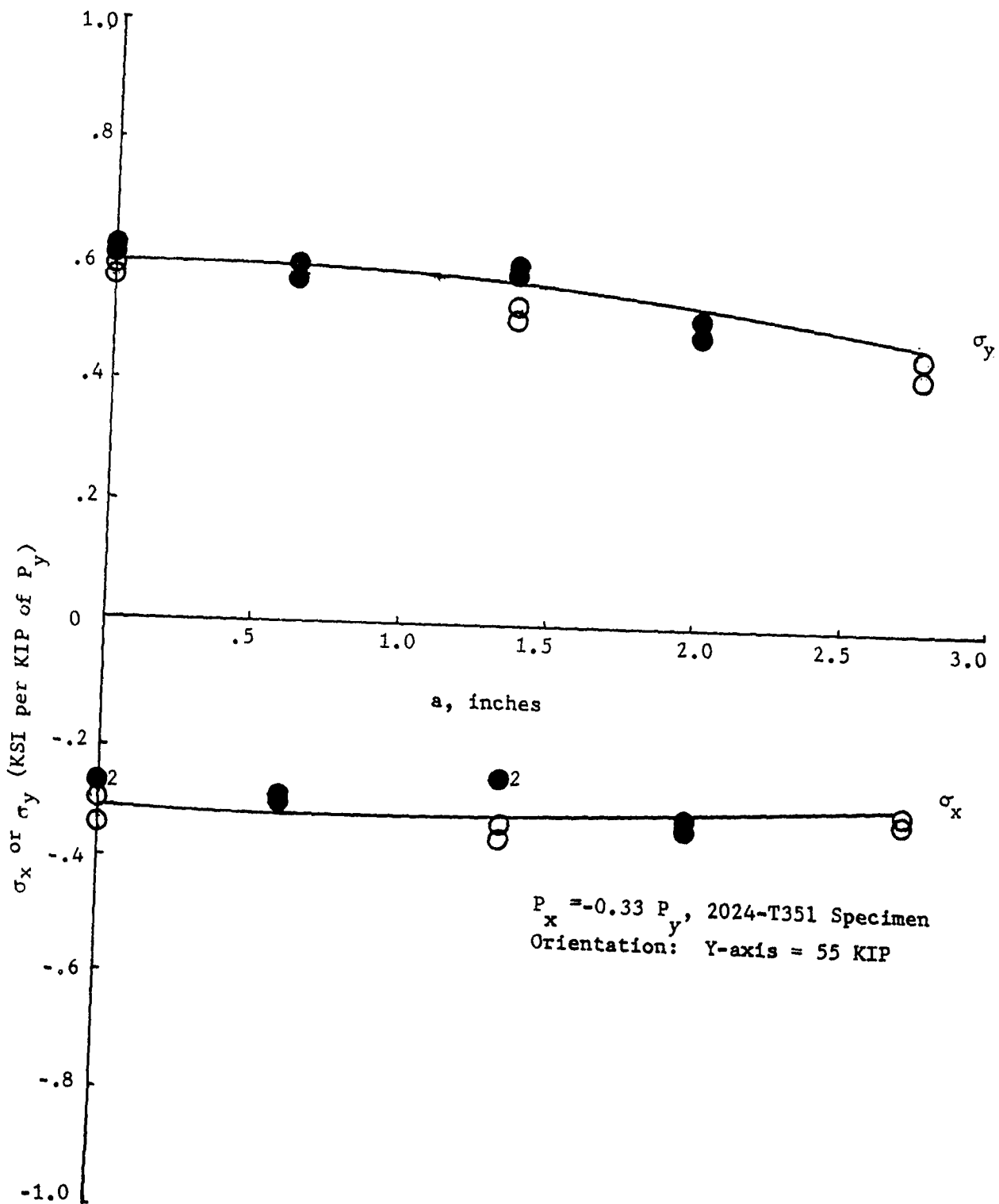


Figure 23 Stress Distribution along the X-axis of the Cruciform Specimen



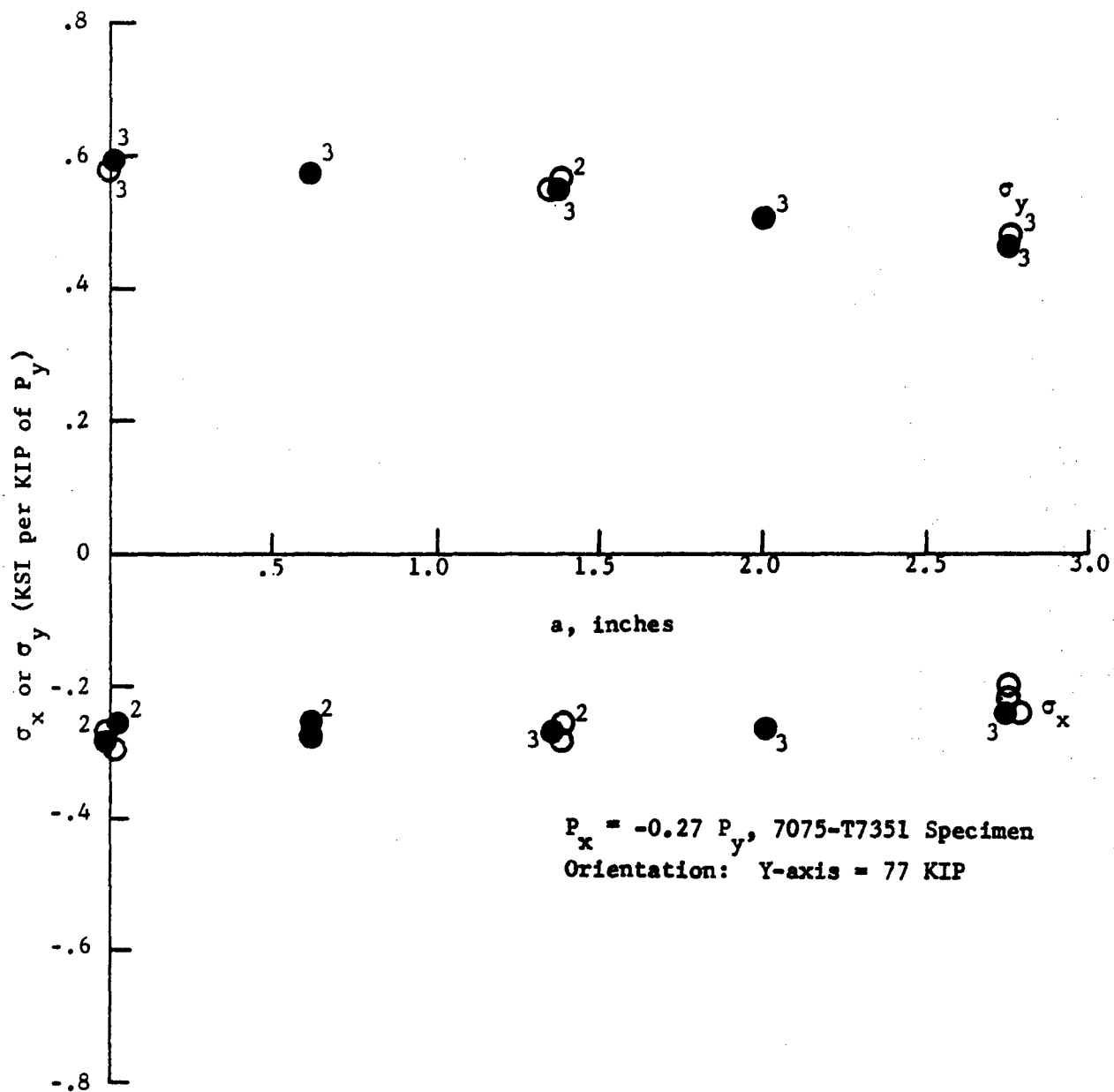


Figure 24 Stress Distribution along the X-axis of the Cruciform Specimen

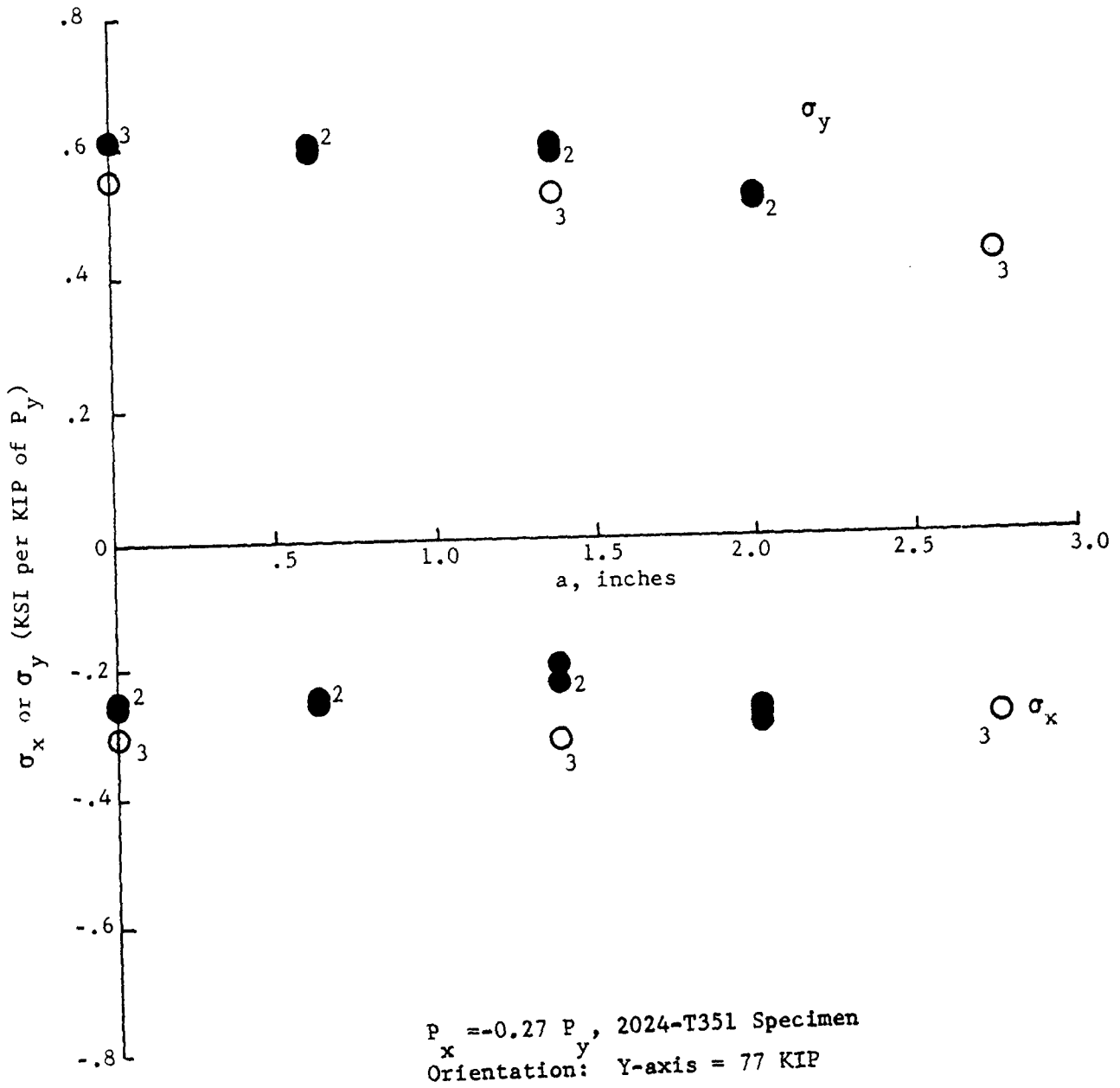


Figure 25 Stress Distribution along the X-axis of the Cruciform Specimen

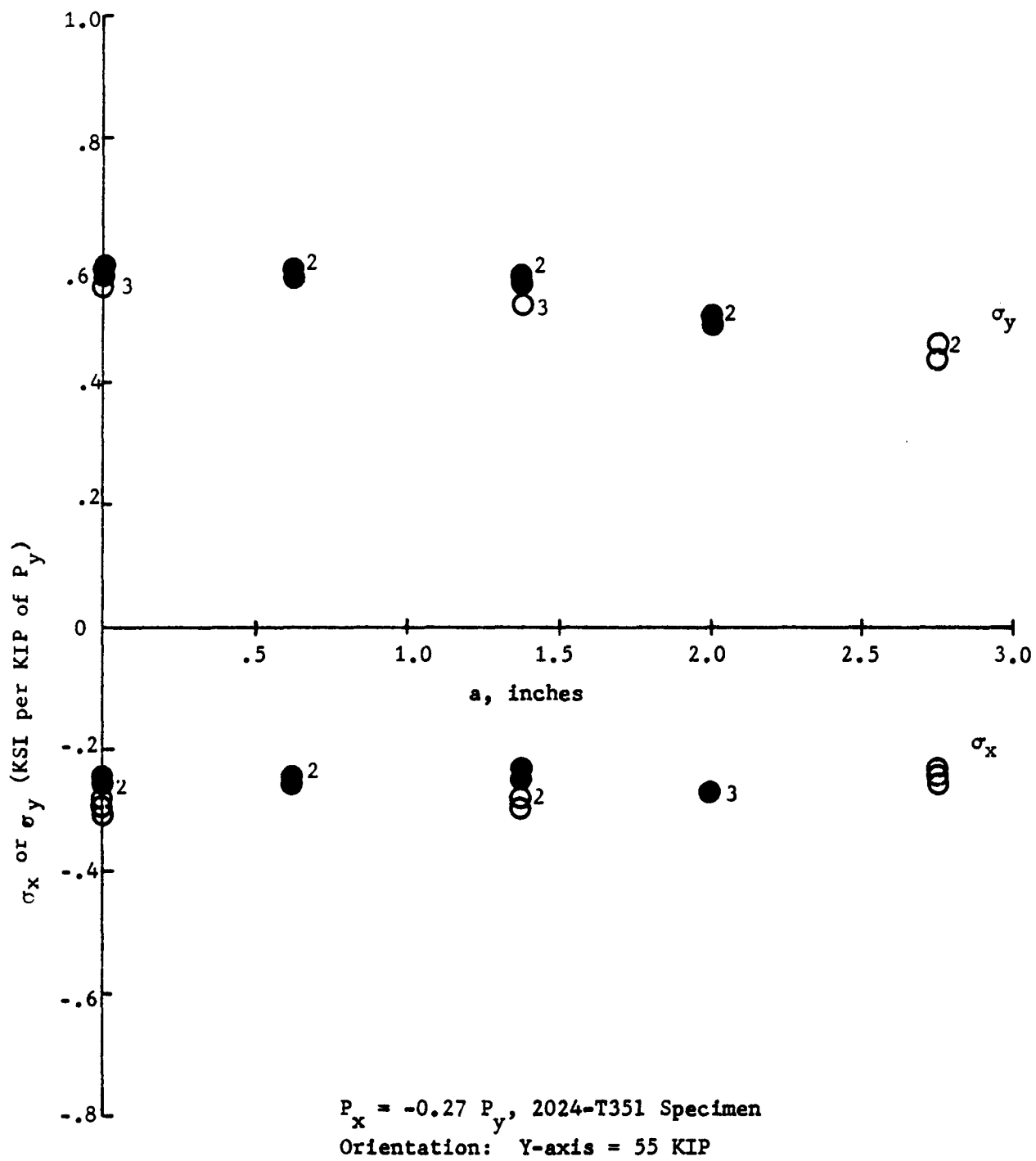


Figure 26 Stress Distribution along the X-axis of the Cruciform Specimen

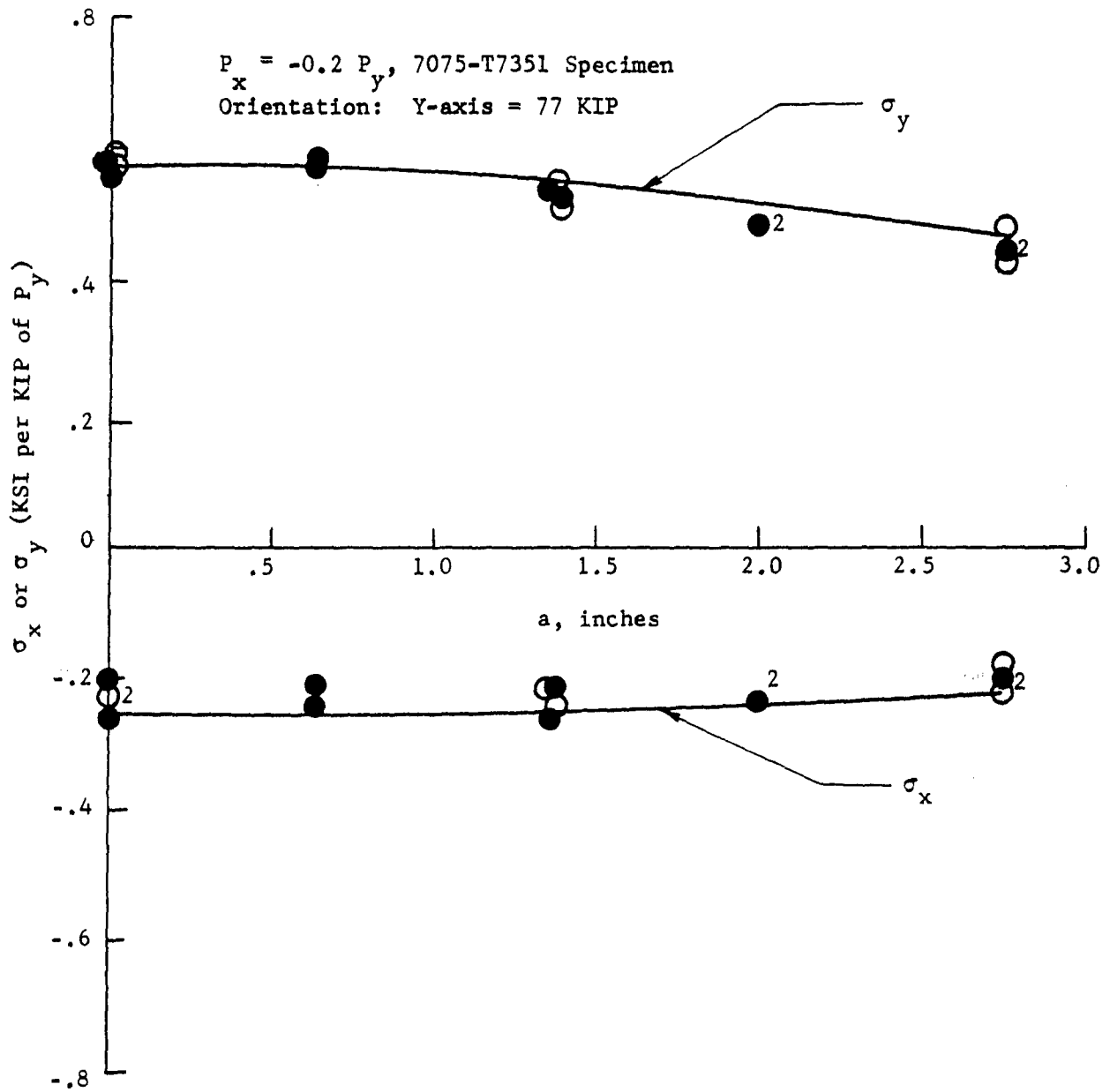
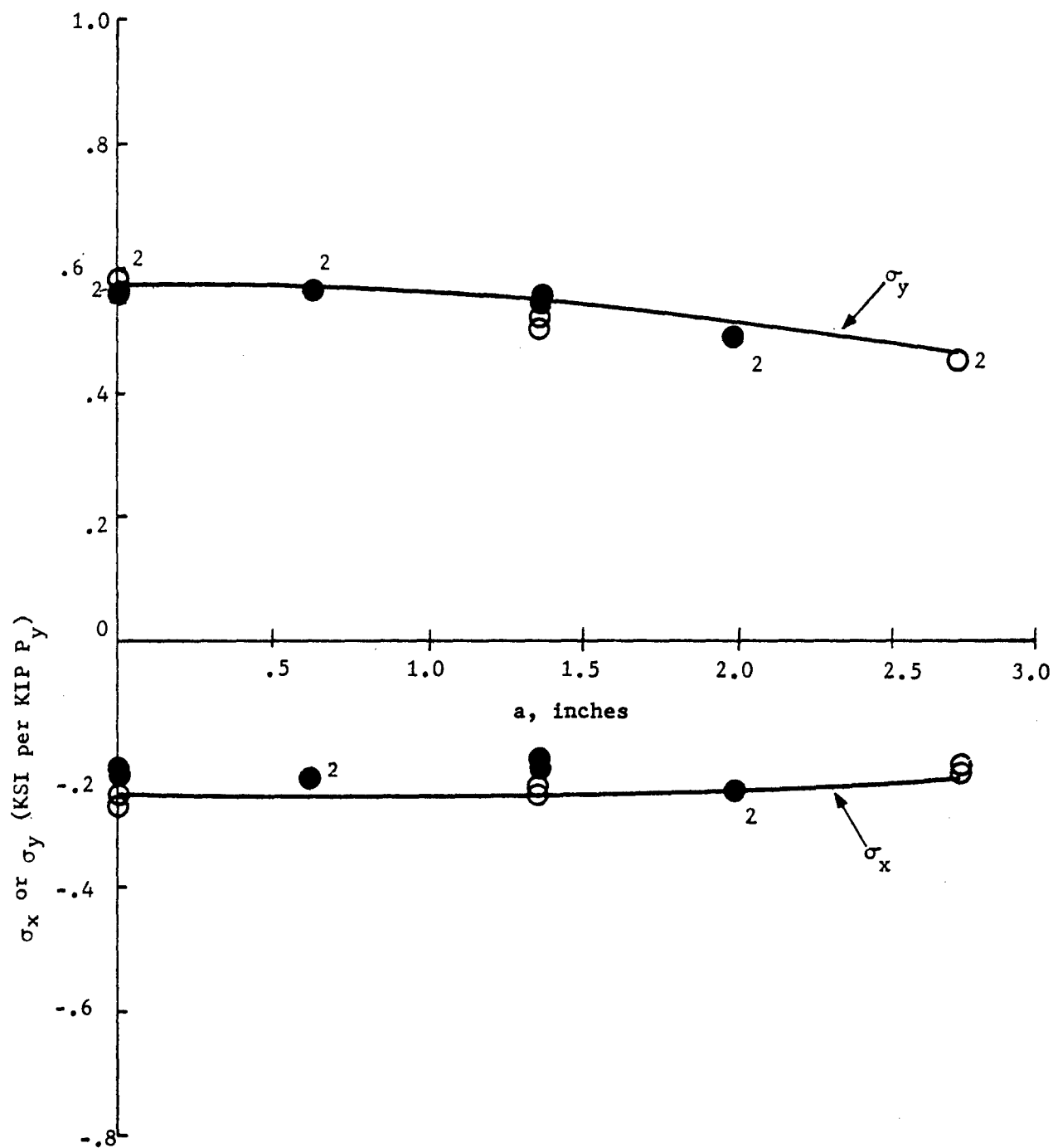


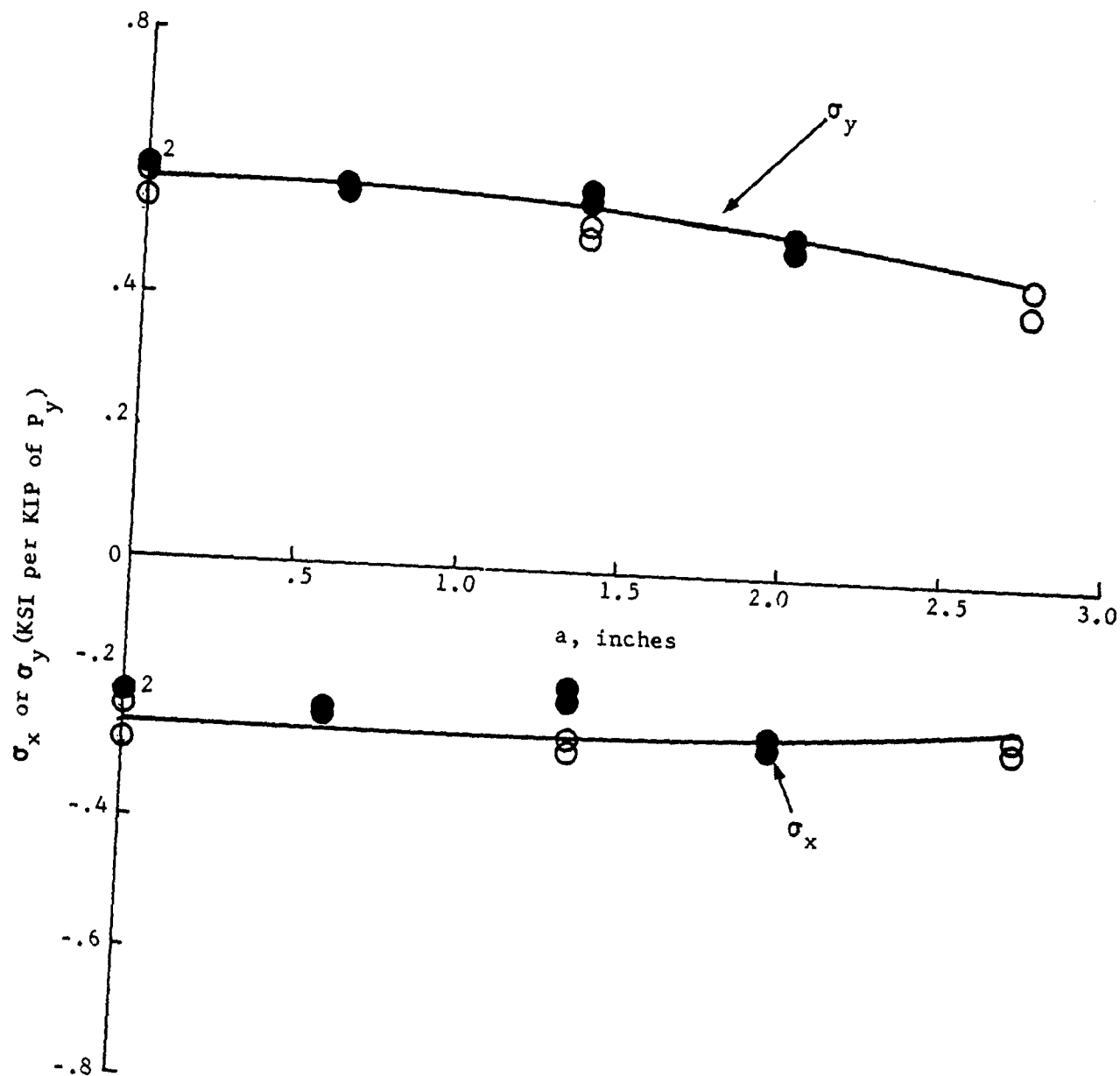
Figure 27 Stress Distribution along the X-axis of the Cruciform Specimen



$P_x = -0.2 P_y$ , 2024-T351 Specimen

Orientation: Y-axis = 77 KIP

Figure 28 Stress Distribution along the X-axis of the Cruciform Specimen



$P_x = -0.2 P_y$ , 2024-T351 Specimen,  
Orientation: Y-axis = 55 KIP

Figure 29 Stress Distribution along the X-axis  
of the Cruciform Specimen

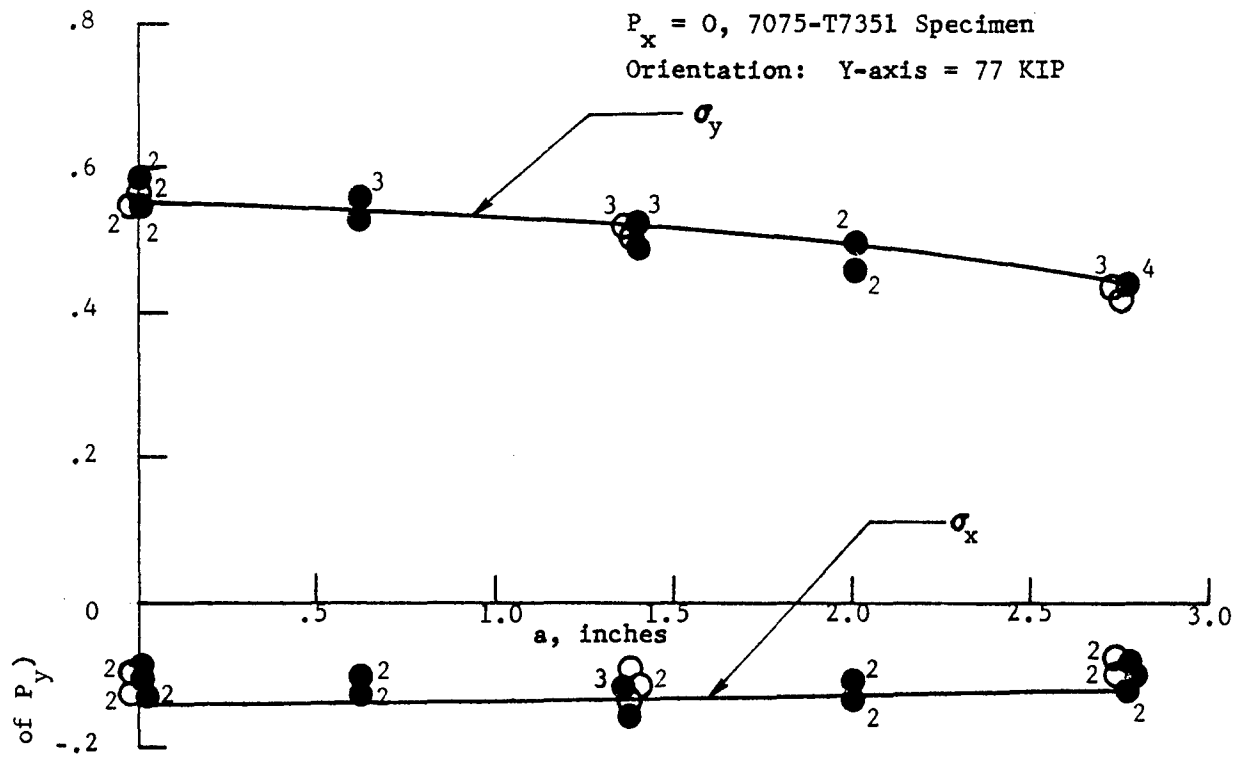


Figure 30 Stress Distribution along the X-axis of the Cruciform Specimen .

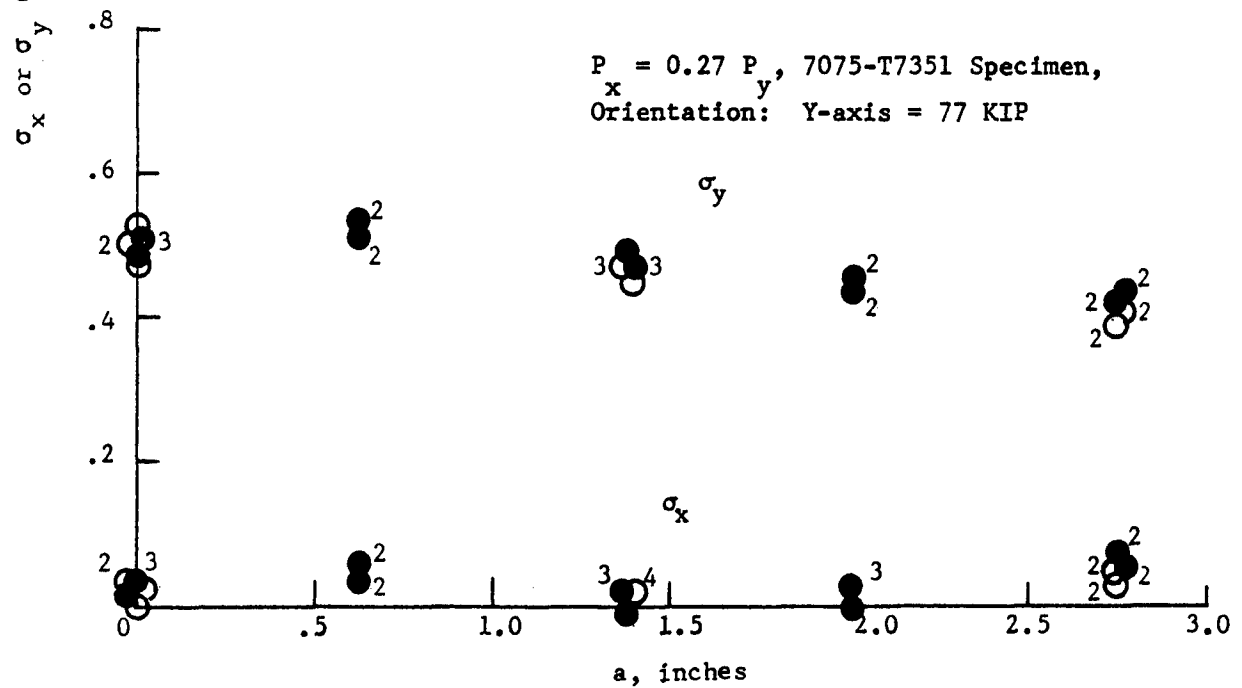


Figure 31 Stress Distribution along the X-axis of the Cruciform Specimen

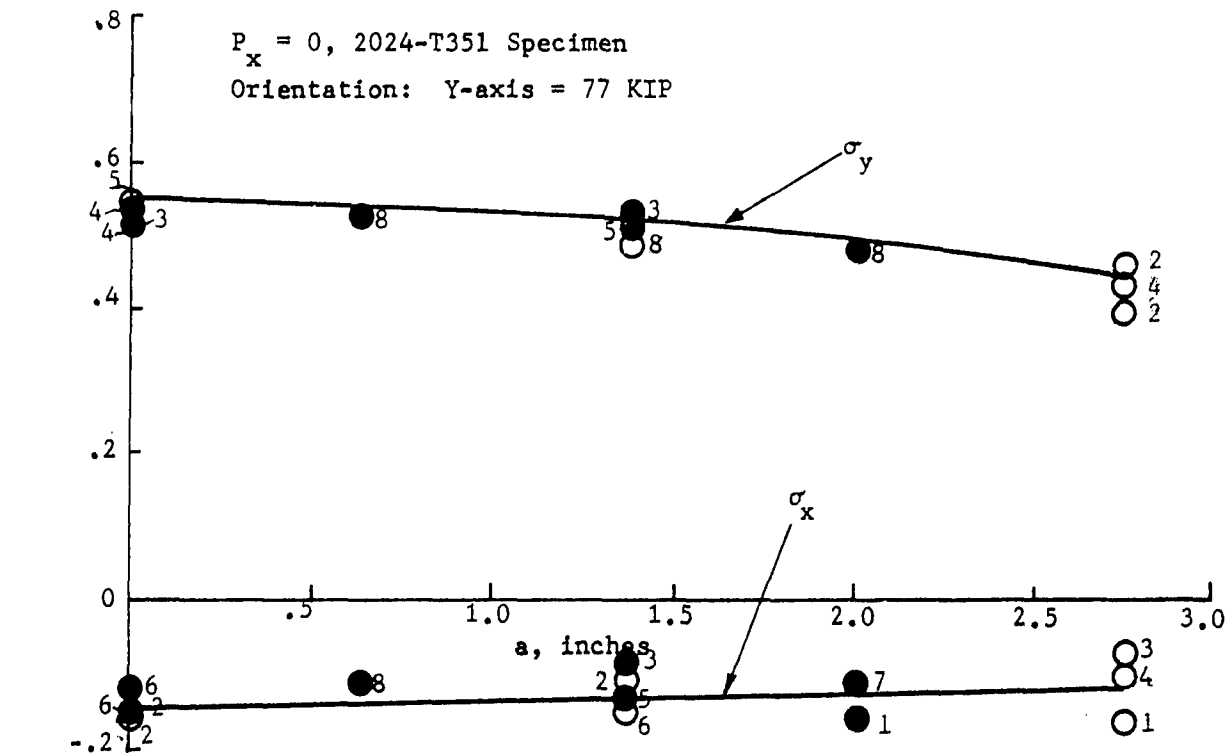


Figure 32 Stress Distribution along the X-axis of the Cruciform Specimen

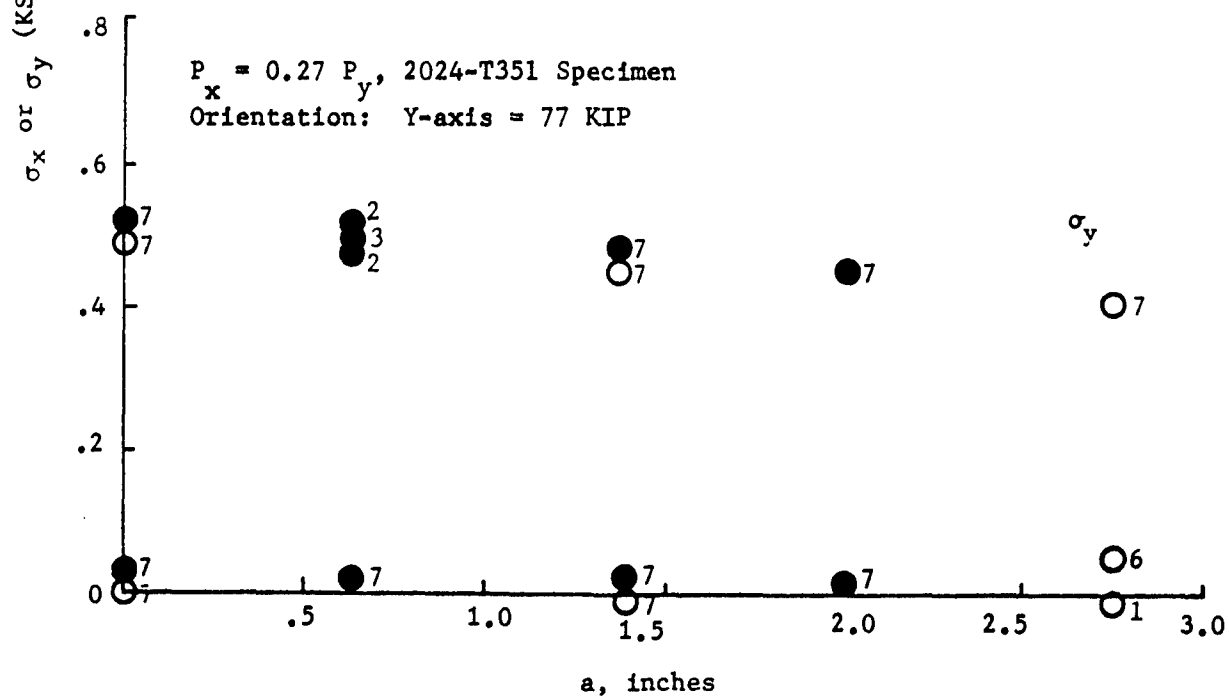


Figure 33 Stress Distribution along the X-axis of the Cruciform Specimen



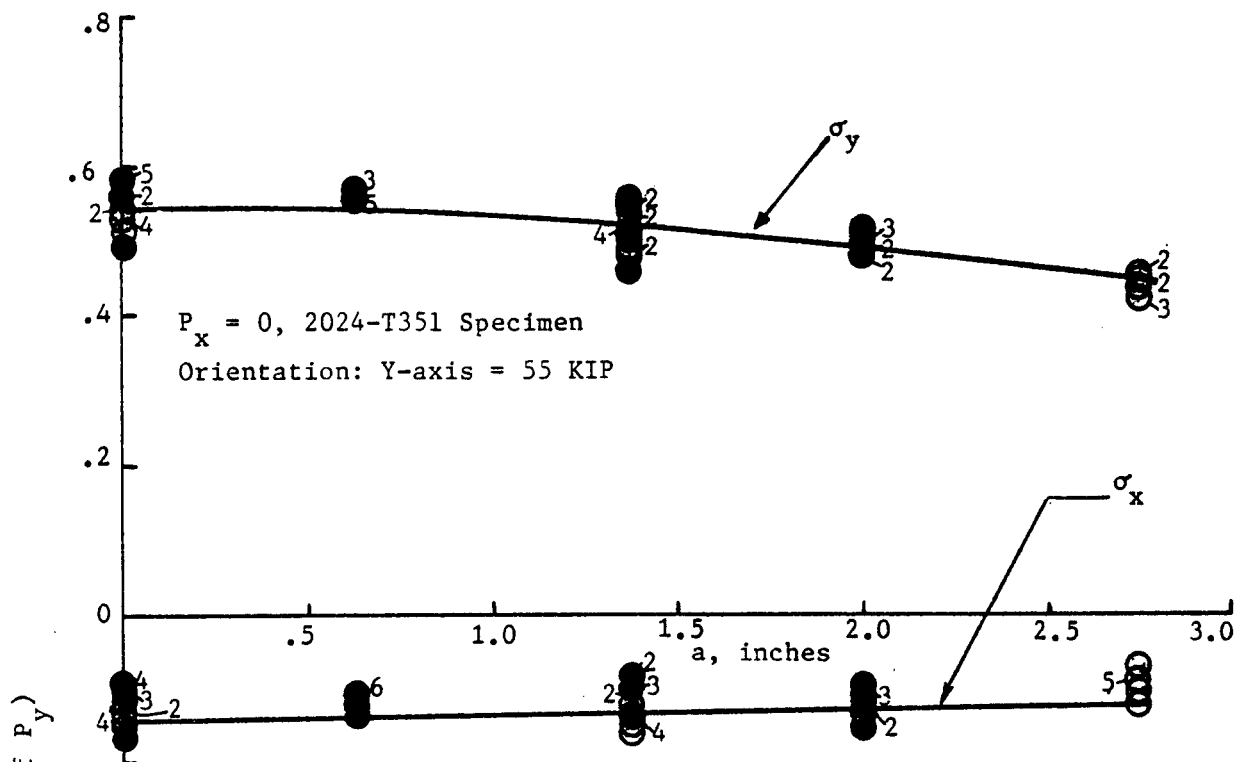


Figure 34 Stress Distribution along the X-axis of the Cruciform Specimen

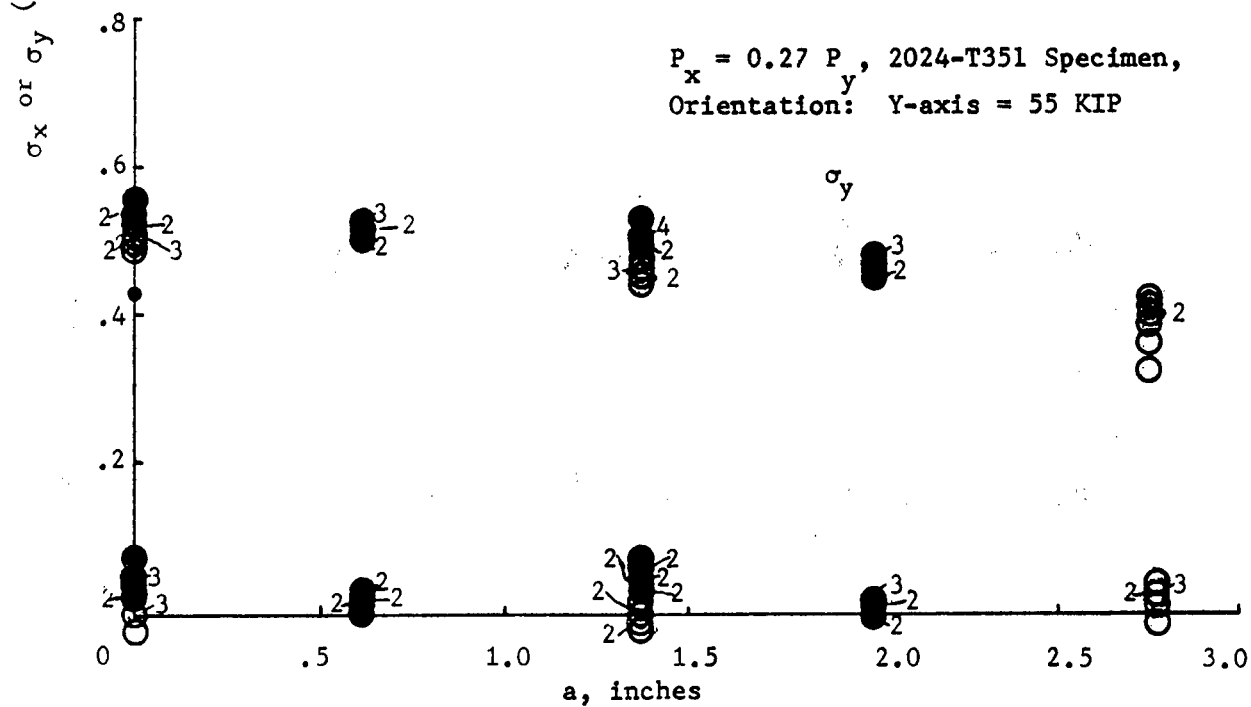


Figure 35 Stress Distribution along the X-axis of the Cruciform Specimen

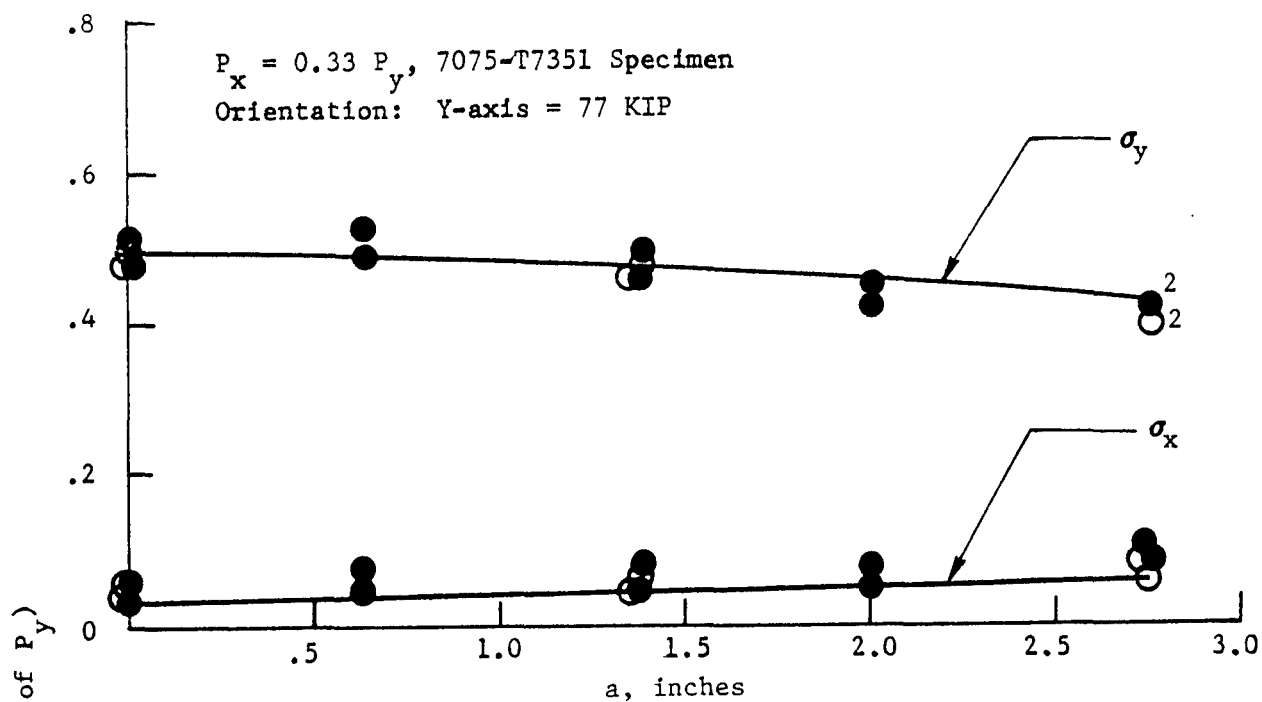


Figure 36 Stress Distribution along the X-axis of the Cruciform Specimen

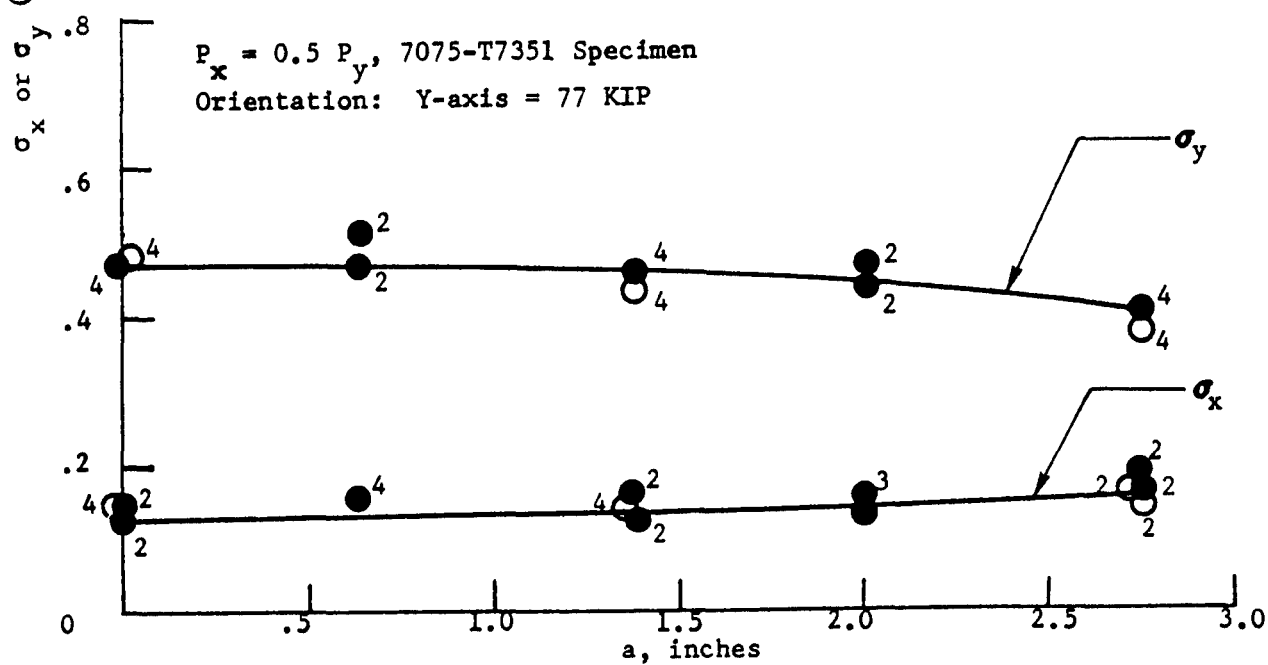


Figure 37 Stress Distribution along the X-axis of the Cruciform Specimen

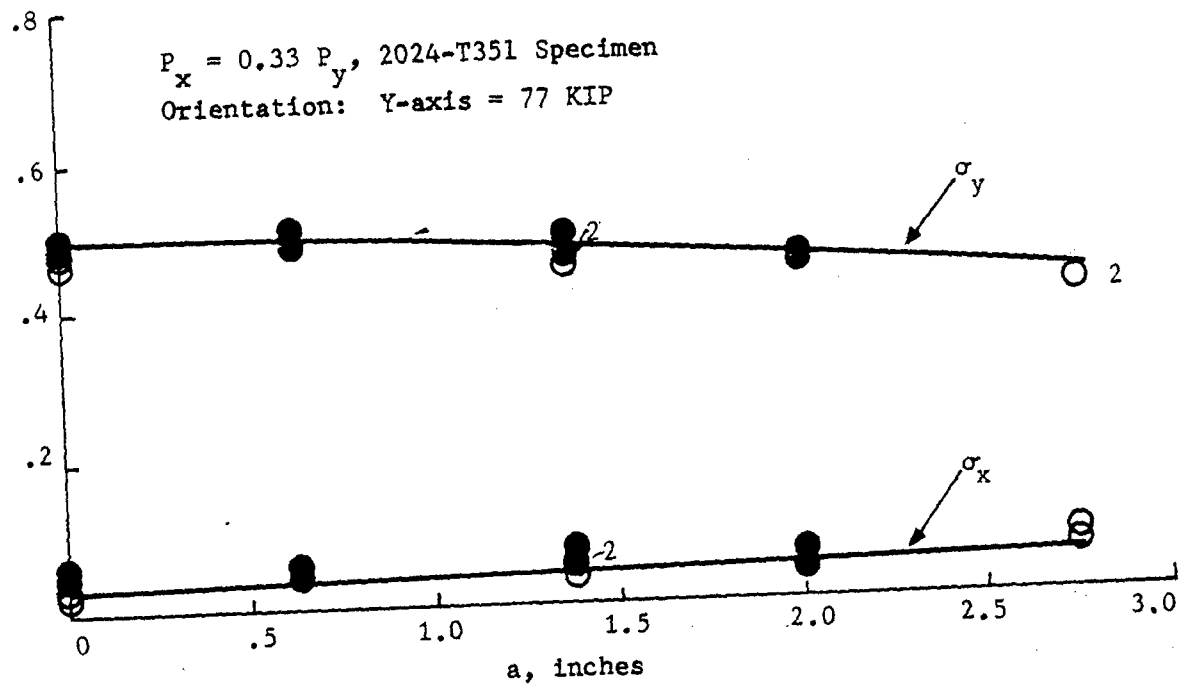


Figure 38 Stress Distribution along the X-axis of the Cruciform Specimen

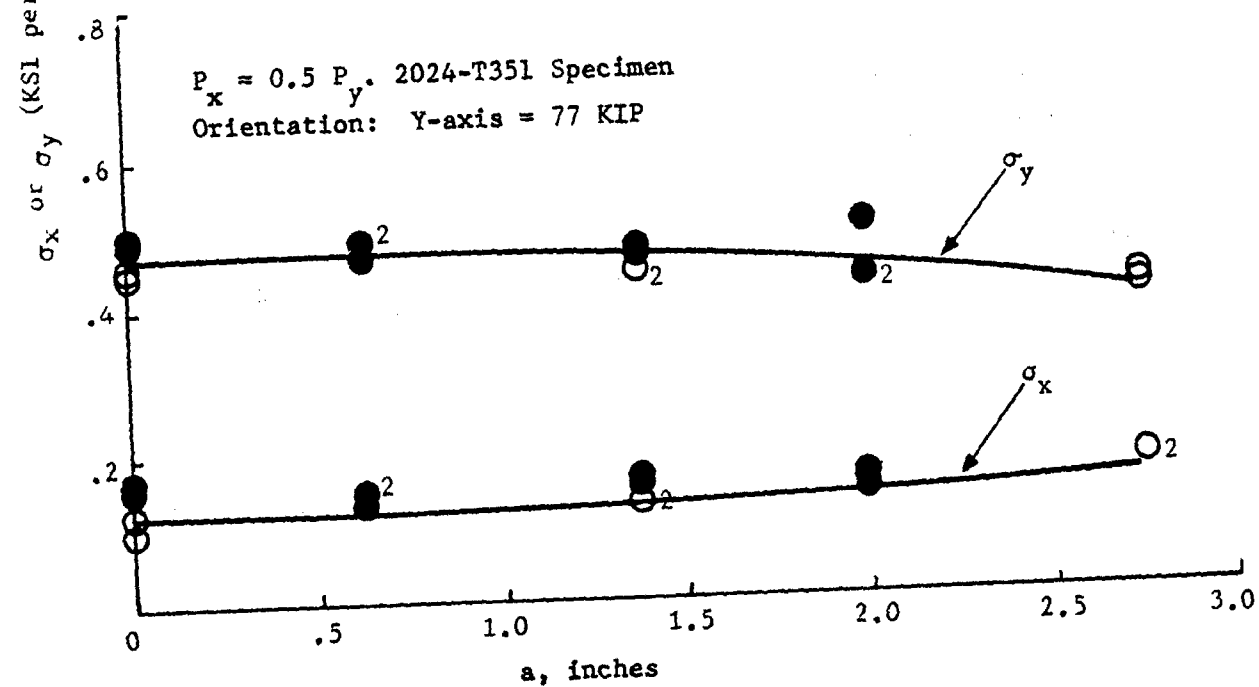


Figure 39 Stress Distribution along the X-axis of the Cruciform Specimen

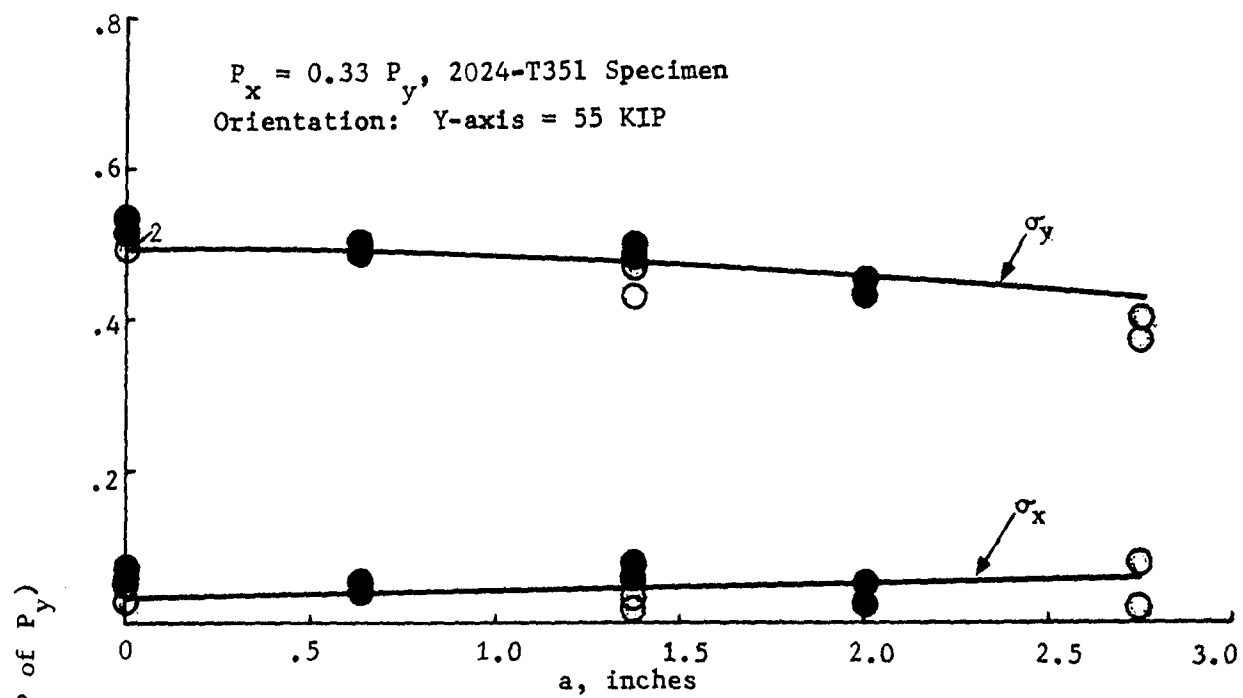


Figure 40 Stress Distribution along the X-axis of the Cruciform Specimen

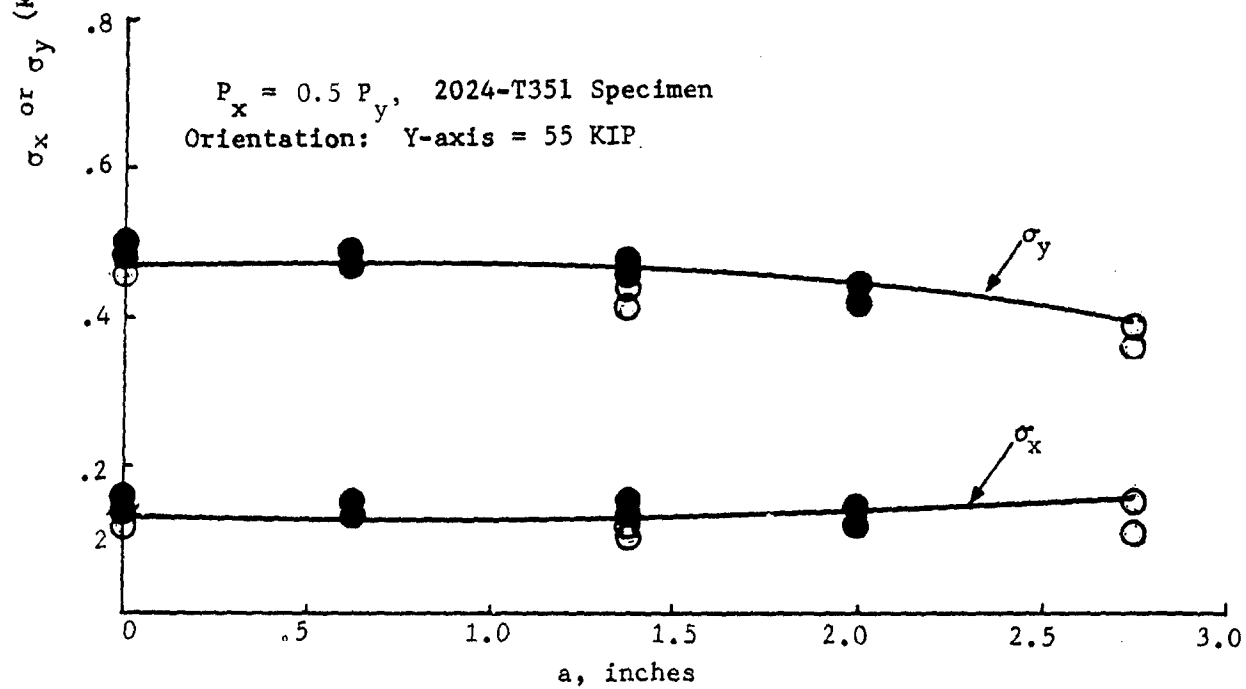


Figure 41 Stress Distribution along the X-axis of the Cruciform Specimen

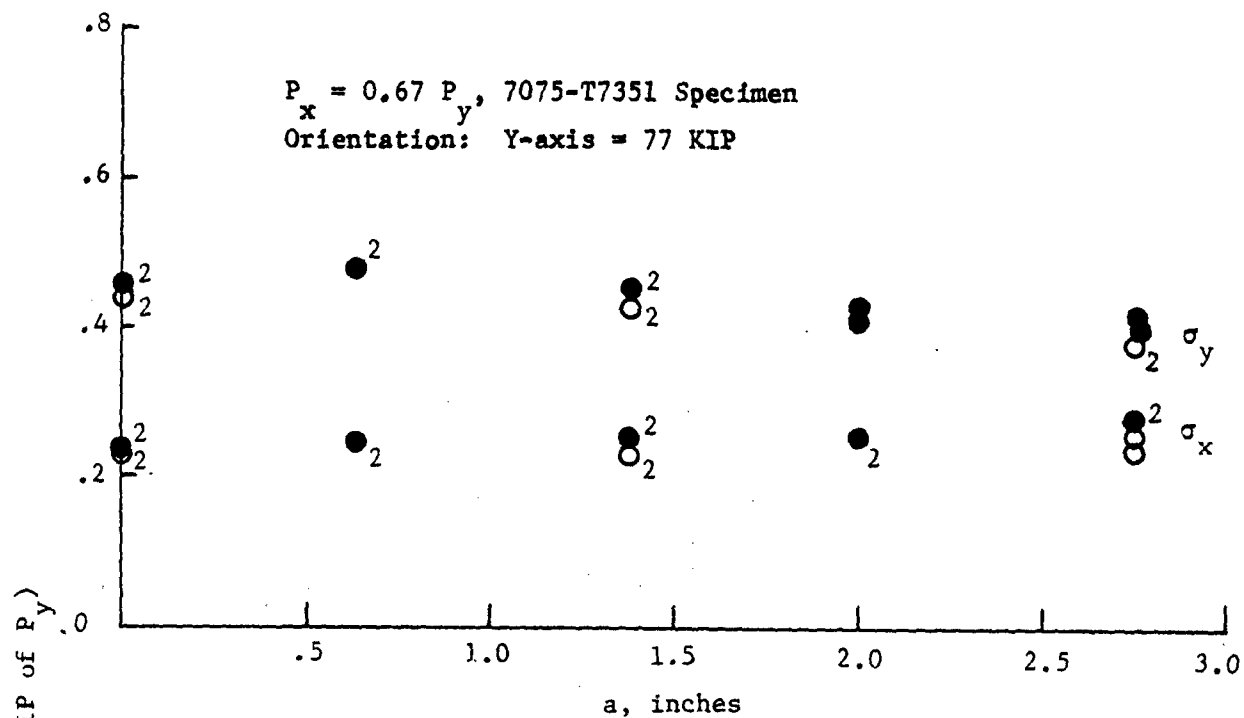


Figure 42 Stress Distribution along the X-axis of the Cruciform Specimen

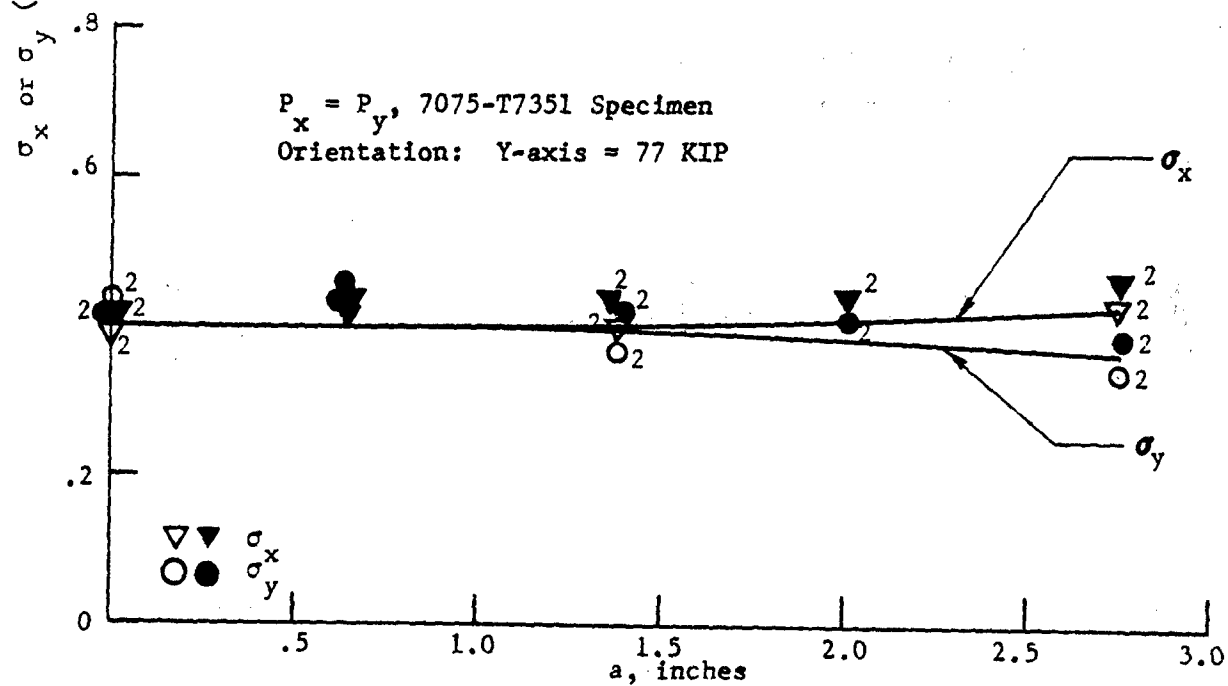


Figure 43 Stress Distribution along the X-axis of the Cruciform Specimen

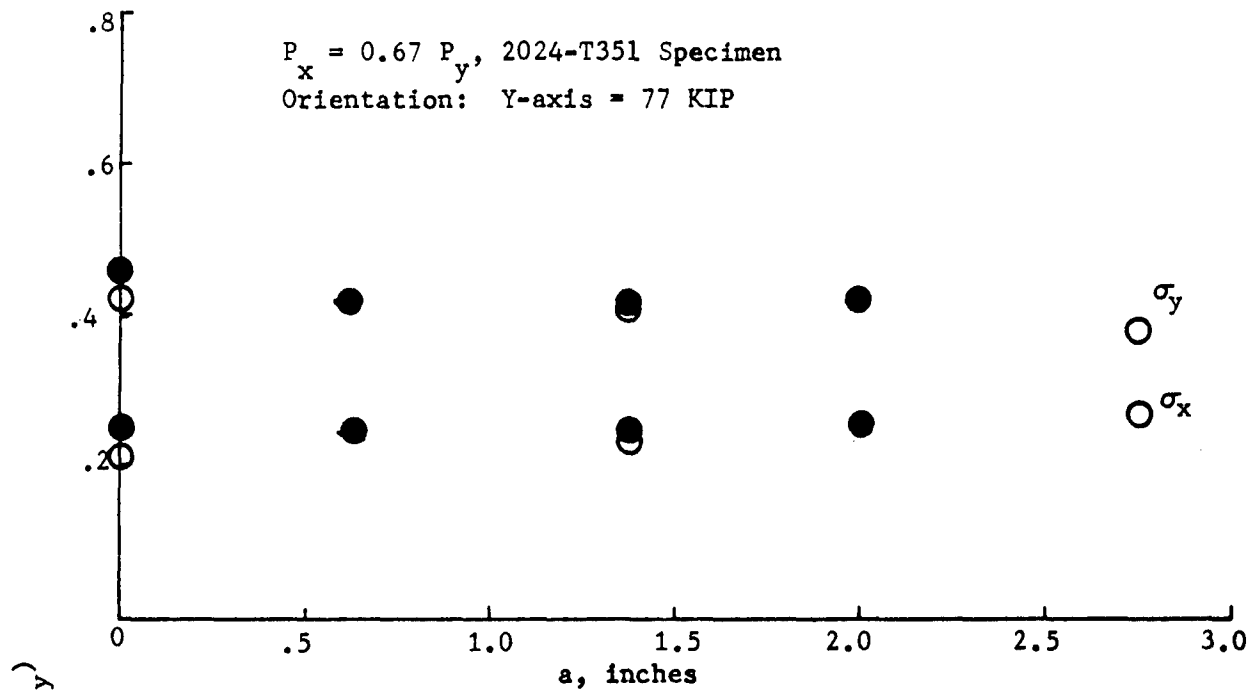


Figure 44 Stress Distribution along the X-axis of the Cruciform Specimen

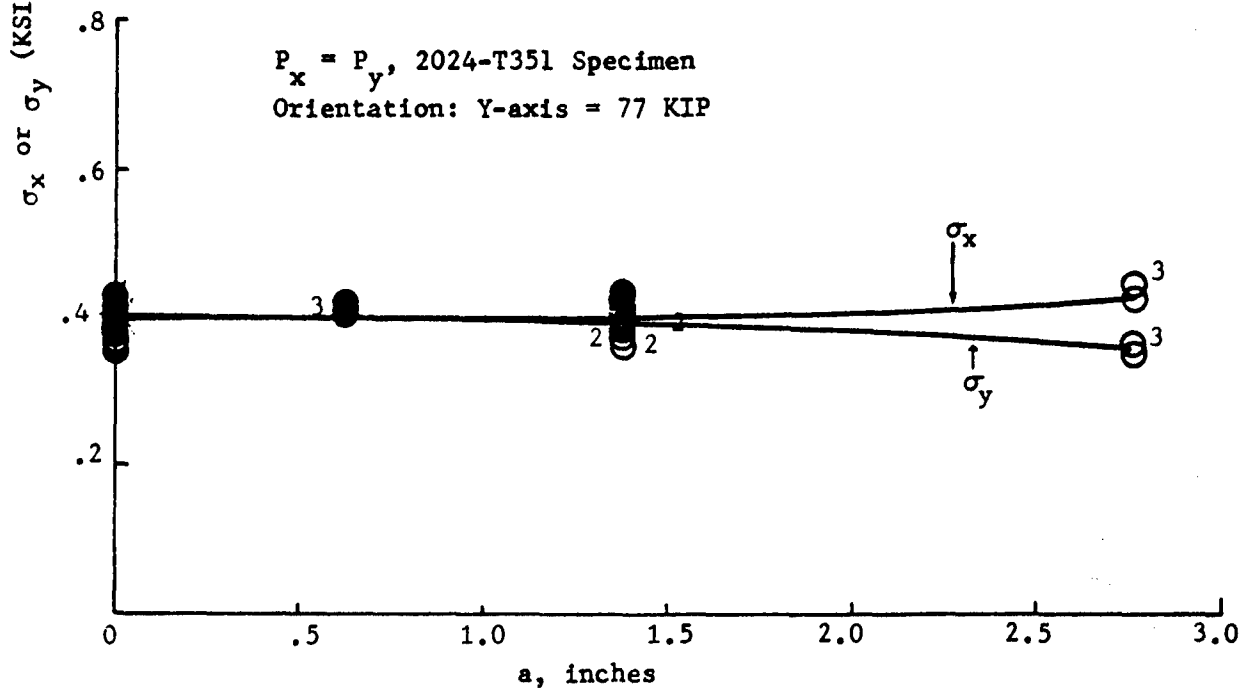


Figure 45 Stress Distribution along the X-axis of the Cruciform Specimen

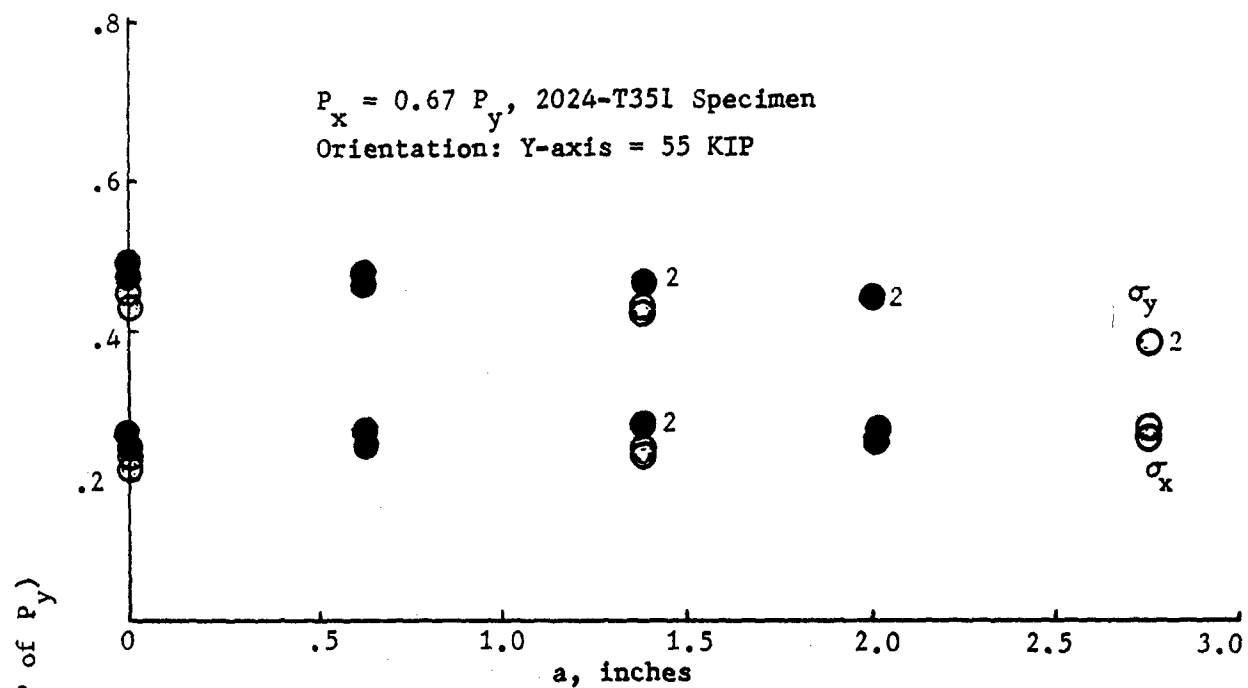


Figure 46 Stress Distribution along the X-axis of the Cruciform Specimen

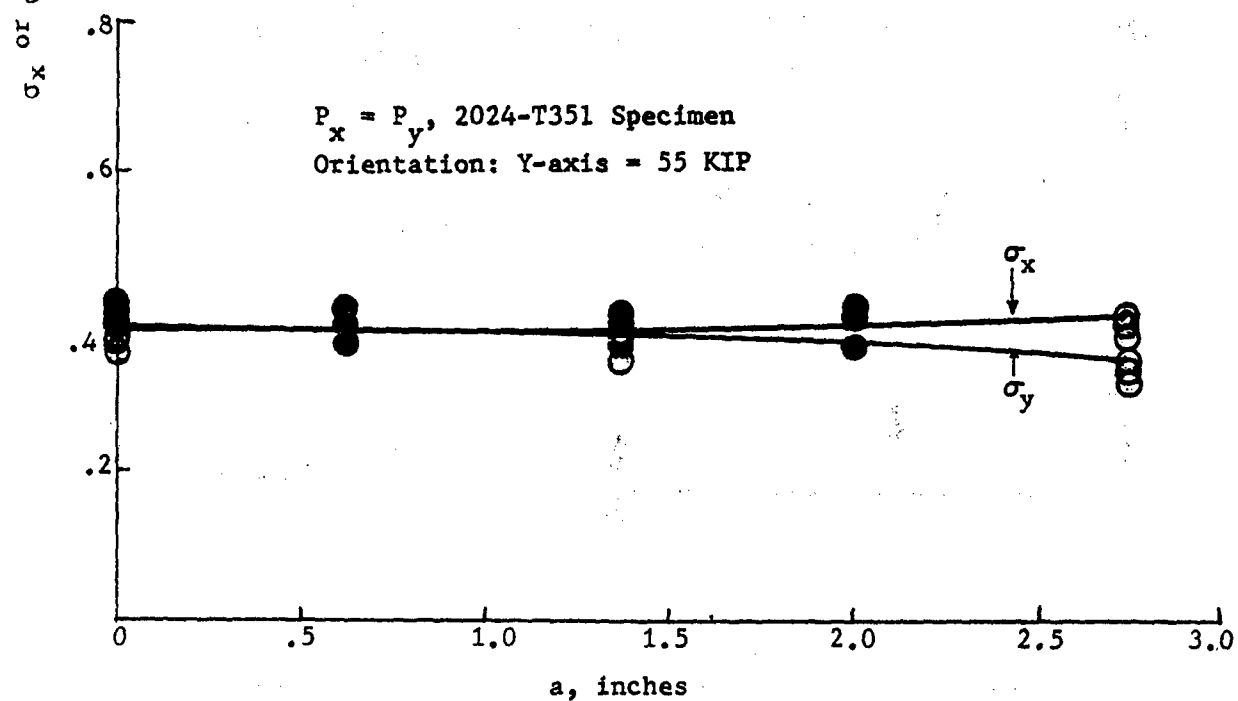


Figure 47 Stress Distribution along the X-axis of the Cruciform Specimen

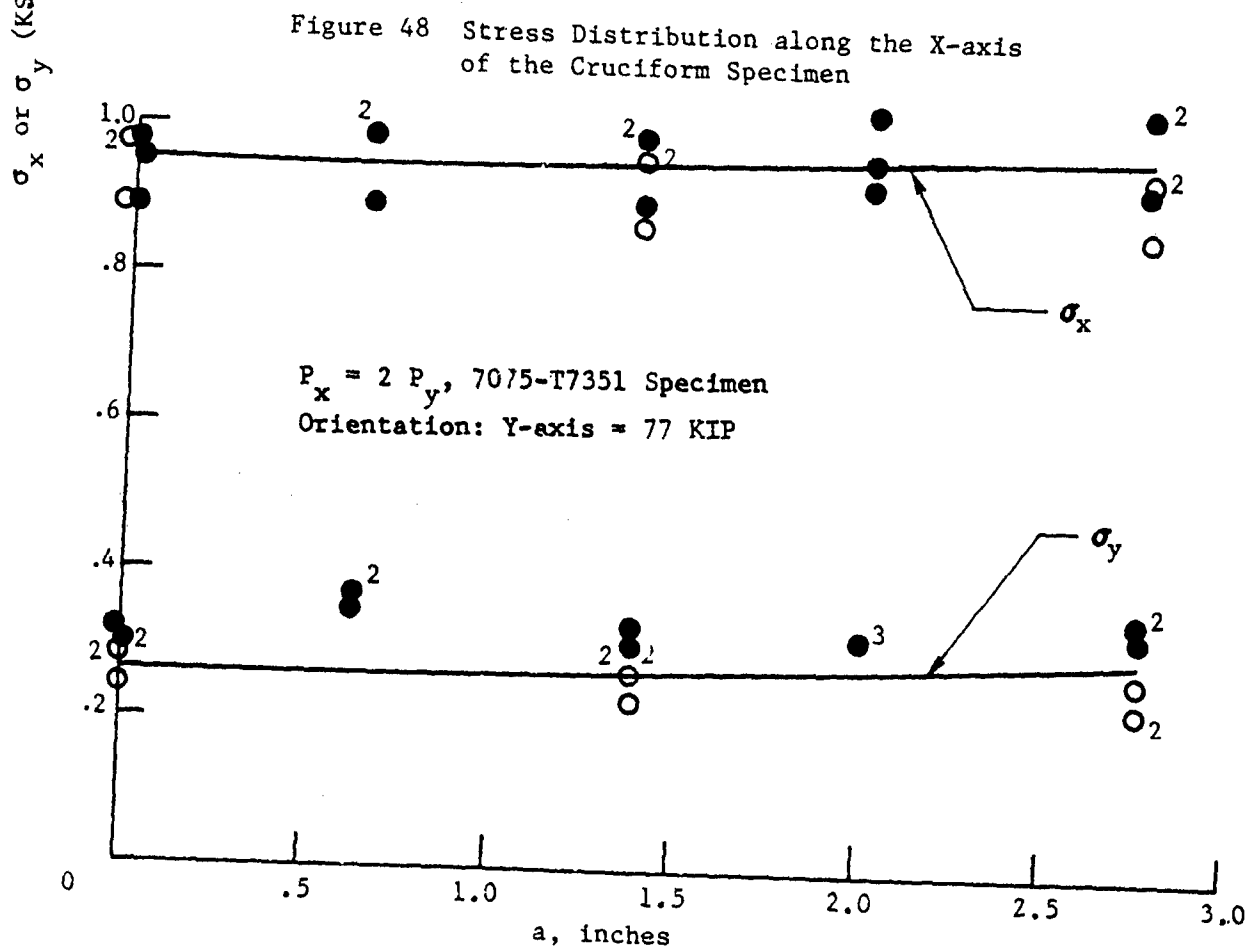
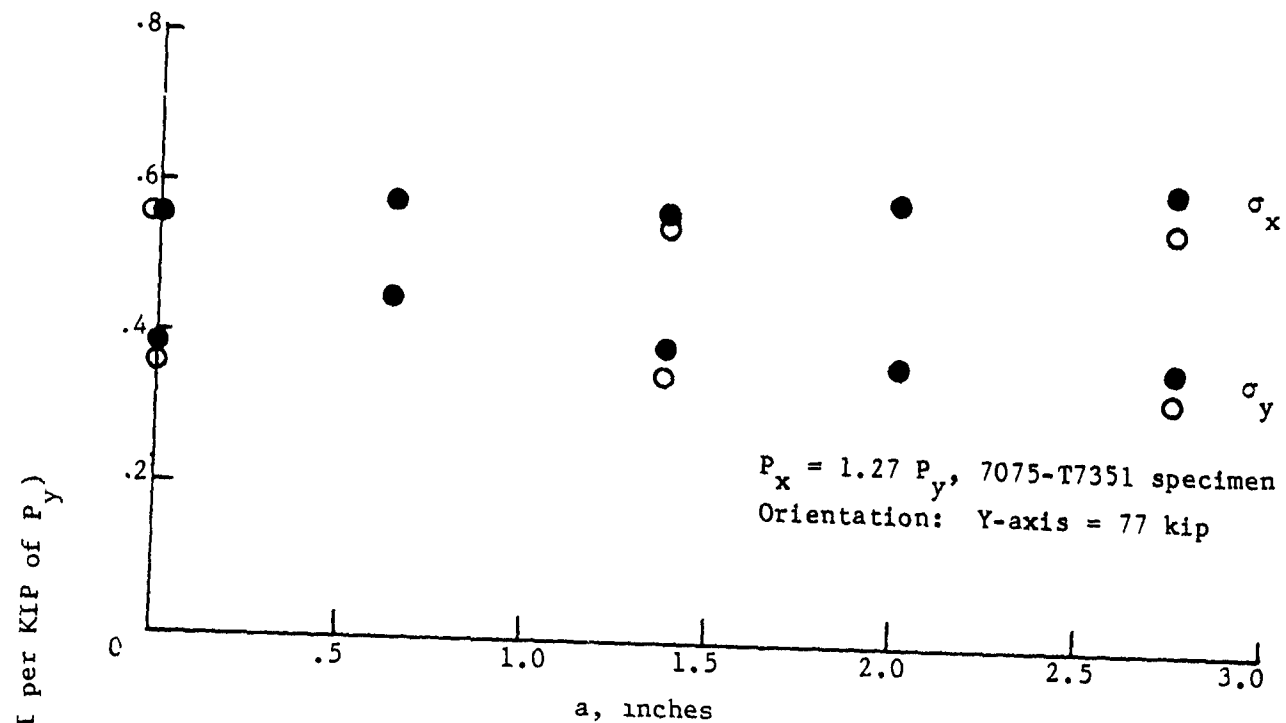


Figure 49 Stress Distribution along the X-axis of the Cruciform Specimen.



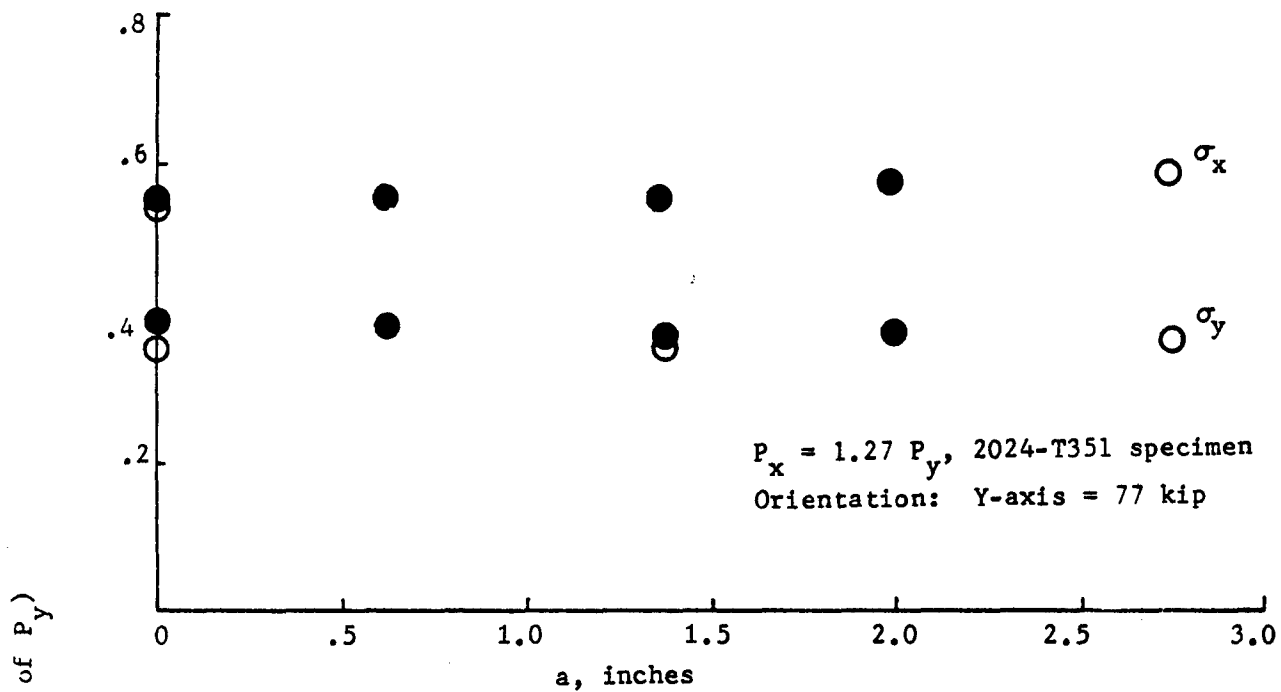


Figure 50 Stress Distribution along the X-axis of the Cruciform Specimen

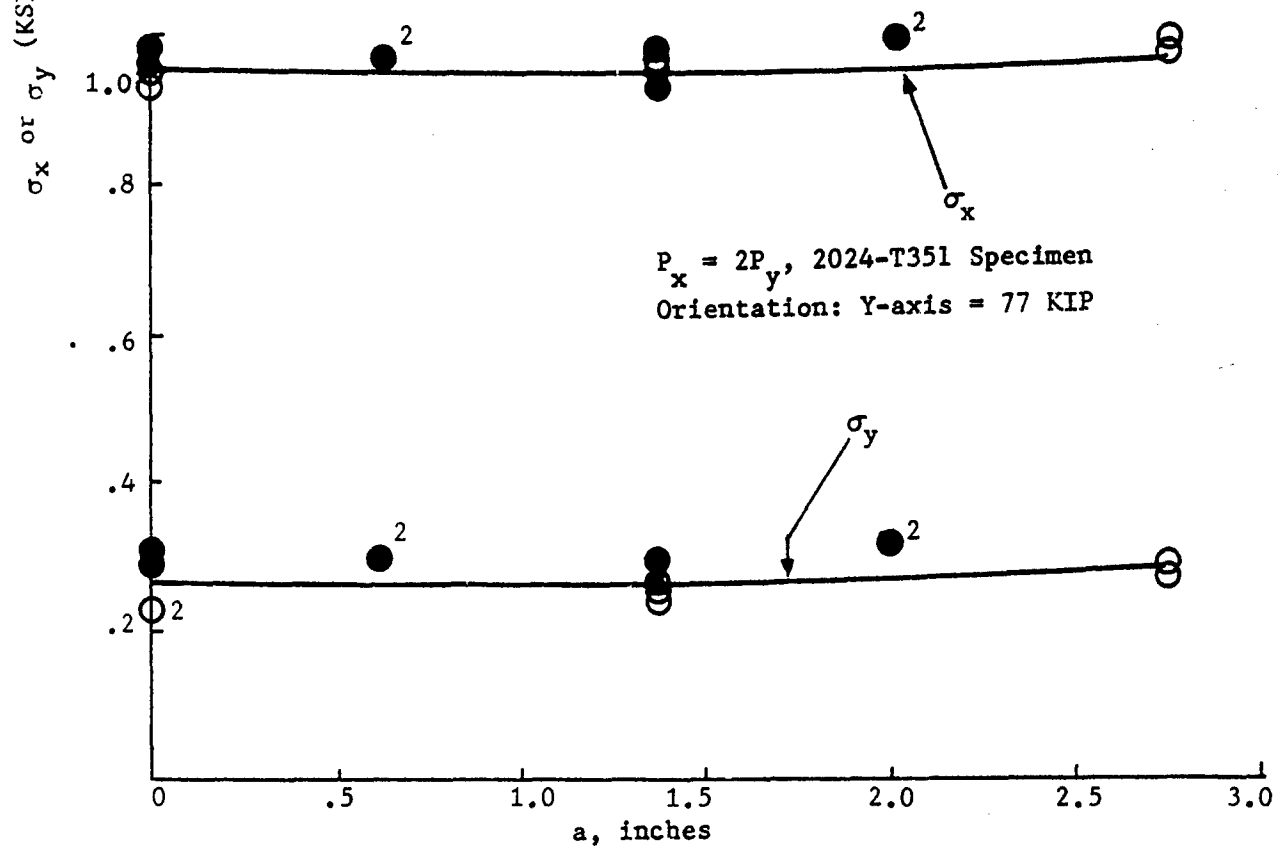


Figure 51 Stress Distribution along the X-axis of the Cruciform Specimen

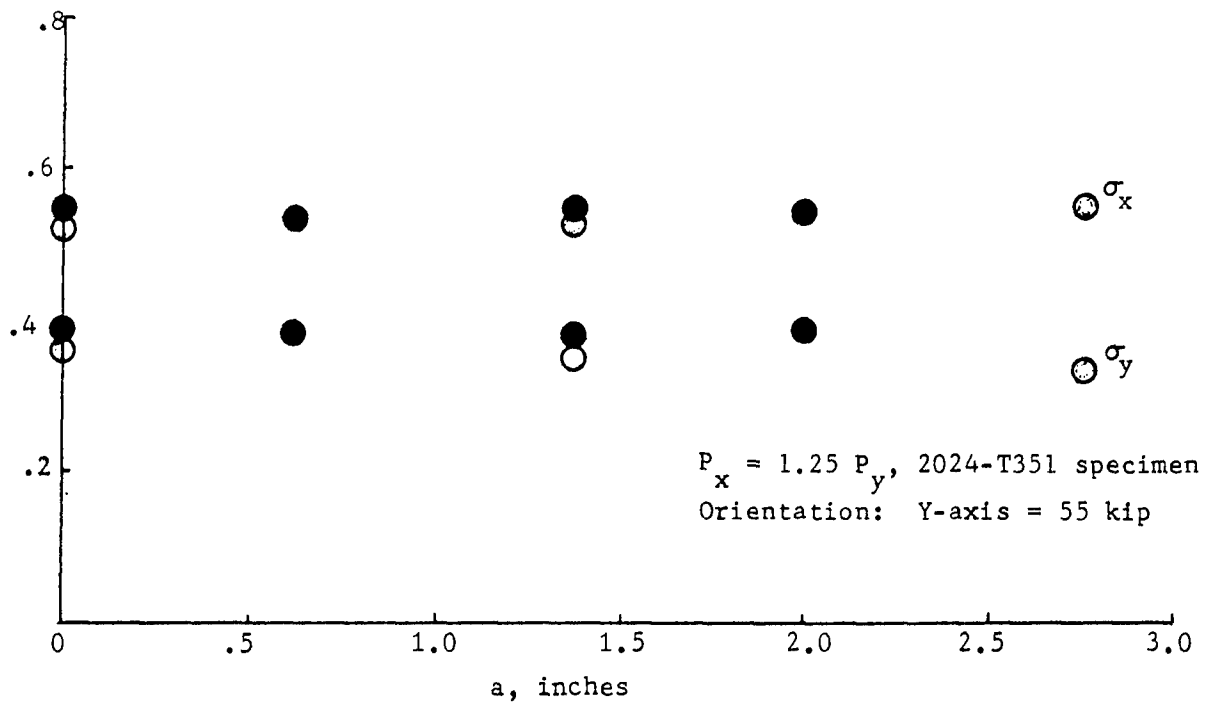


Figure 52 Stress Distribution along the X-axis of the Cruciform Specimen

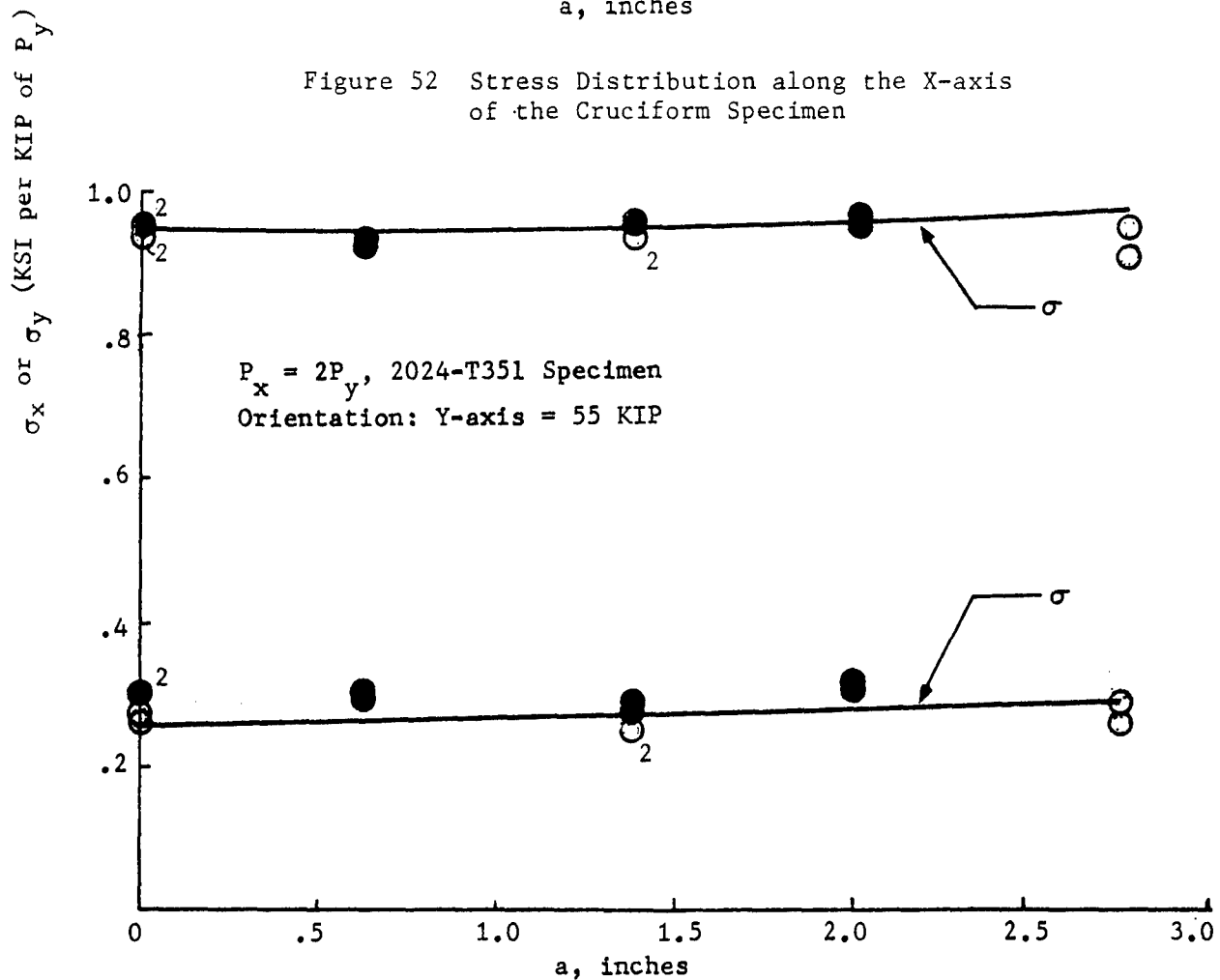


Figure 53 Stress Distribution along the X-axis of the Cruciform Specimen

### STRAIN GAUGE RESULTS

$\sigma_y$ (Ksi)	$\sigma_x$ (Ksi)	a (Inch)
11.9415	-5.70496	0.095
11.7651	-5.1835	0.1275
12.0237	-5.78715	0.2475
12.4781	-5.22013	0.375
12.727	-5.08723	0.5
12.7803	-4.7507	0.625
13.1916	-4.61631	0.75
13.6076	-4.33072	0.875
14.0797	-4.02327	1.0025
14.3196	-3.95126	1.125
16.5877	-2.55542	1.4
18.0708	-1.62181	1.505
20.5358	0.0448793	1.64
24.2587	2.24675	1.7475
33.219	6.85095	1.875
37.0962	11.2372	1.9975

Test Case No. 105

7075-T7351 Cruciform Specimen

$\sigma_{y,max} = 12 \text{ ksi}$ ,  $B = -.5$

$R = 0.1$ ,  $\omega t = 0^\circ$

One rosette located on the X-axis, 2-inches from the center of the specimen.

### STRAIN GAUGE RESULTS

$\sigma_y$ (Ksi)	$\sigma_y$ (Ksi)	a (Inch)
10.8872	9.06063	0.1025
10.8077	9.06368	0.125
10.8774	9.14693	0.25
10.7522	9.42499	0.375
10.6821	9.49504	0.5
10.9943	9.71785	0.6125
11.0573	9.80769	0.7425
11.6794	10.5614	0.8875
11.5064	11.1929	0.9975
12.6067	11.6976	1.2575
14.2717	9.6504	1.5
14.2611	4.15819	1.7525

Test Case No. 43

2024-T351 Cruciform Specimen

$\sigma_{y,max} = 10 \text{ ksi}$ ,  $B = 1.0$

$R = 0.1$ ,  $\omega_t = 180^\circ$

One rosette located on the X-axis, 2-inches from the center of the specimen.

TABLE 1. BASIC BIAXIAL RATIO EFFECT TESTS

Material	Test Case	$\sigma_{y,max}$	$\sigma_{y,min}$	$\sigma_{x,max}$	$\sigma_{x,min}$	f	Notes
7075-T7351	70	12.0	1.2	-1.8	-18.0	8	
7075-T7351	25	12.0	1.2	-1.2	-12.0	10	1
7075-T7351	26	12.0	1.2	-1.2	-12.0	5	
7075-T7351	56	18.0	1.8	-1.8	-18.0	5	1
7075-T7351	58	18.0	1.8	-0.9	-9.0	5	
7075-T7351	135	18.0	1.8	-0.9	-9.0	2	
7075-T7351	64	30.0	3.0	-1.5	-15.0	2	
7075-T7351	29	12.0	1.2	-0.6	-6.0	5	
7075-T7351	30	12.0	1.2	-0.6	-6.0	10	
7075-T7351	27	12.0	1.2	6.0	0.6	7	1
7075-T7351	28	12.0	1.2	6.0	0.6	8	
7075-T7351	139	30.0	3.0	15.0	1.5	2	
7075-T7351	63	30.0	3.0	15.0	1.5	2	1
7075-T7351	57	18.0	1.8	9.0	0.9	5	
7075-T7351	133	18.0	1.8	18.0	1.8	5	
7075-T7351	55	18.0	1.8	18.0	1.8	3	1
7075-T7351	23	12.0	1.2	12.0	1.2	10	1
7075-T7351	24	12.0	1.2	12.0	1.2	5	
7075-T7351	141	12.0	1.2	15.0	1.5	5	
7075-T7351	68	12.0	1.2	18.0	1.8	5	
7075-T7351	142	12.0	1.2	21.0	2.1	5	
7075-T7351	1	6.0	0.6	0	0	5	2
7075-T7351	2	10.0	1.0	0	0	5	2
7075-T7351	123	4.8	0.48	0	0	10	2 3 4
7075-T7351	7	12.0	1.2	0	0	5	
7075-T7351	8	12.0	1.2	0	0	10	1
7075-T7351	125	4.8	0.48	0	0	10	2 3 4 5
7075-T7351	131	20.0	2.0	0	0	5	2 5 6

TABLE 1. (continued)

Material	Test Case	$\sigma_{y,max}$	$\sigma_{y,min}$	$\sigma_{x,max}$	$\sigma_{x,min}$	f	Notes
7075-T7351	5	7.0	0.7	0	0	5	2 5
7075-T7351	13	12.0	1.2	0	0	5	5
2024-T351	60	15.0	1.5	-1.5	-15.0	5	1
2024-T351	33	10.0	1.0	-1.0	-10.0	10	1
2024-T351	34	10.0	1.0	-1.0	-10.0	5	
2024-T351	137	30.0	3.0	-1.5	-15.0	2	
2024-T351	66	25.0	2.5	-1.25	-12.5	2	1
2024-T351	140	25.0	2.5	-1.25	-12.5	2	
2024-T351	62	15.0	1.5	-0.75	-7.5	5	
2024-T351	37	10.0	1.0	-0.5	-5.0	10	
2024-T351	38	10.0	1.0	-0.5	-5.0	5	
2024-T351	35	10.0	1.0	5.0	0.5	10	
2024-T351	36	10.0	1.0	5.0	0.5	5	
2024-T351	136	15.0	1.5	7.5	0.75	2	
2024-T351	61	15.0	1.5	7.5	0.75	5	
2024-T351	65	25.0	2.5	12.5	1.25	2	
2024-T351	138	30.0	3.0	15.0	1.5	2	
2024-T351	134	10.0	1.0	10.0	1.0	5	
2024-T351	31	10.0	1.0	10.0	1.0	8	1
2024-T351	32	12.0	1.2	12.0	1.2	5	
2024-T351	59	15.0	1.5	15.0	1.5	5	1
2024-T351	3	10.0	1.0	0	0	5	2
2024-T351	4	6.0	0.6	0	0	5	2
2024-T351	9	10.0	1.0	0	0	5	
2024-T351	10	10.0	1.0	0	0	10	1
2024-T351	6	6.0	0.6	0	0	5	2 5

TABLE 1. (continued)

Material	Test Case	$\sigma_{y,max}$	$\sigma_{y,min}$	$\sigma_{x,max}$	$\sigma_{x,min}$	f	Notes
2024-T351	132	8.0	0.8	0	0	5	2 5 6
2024-T351	14	10.0	1.0	0	0	5	5
2024-T351	149	6.0	0.6	0	0	10	7 2

- 1 Interferometry photographs
- 2 CCT specimen
- 3 20Hz for  $da/dN < 10^{-6}$  inch/cycle
- 4 Precracking data for the fracture specimen
- 5 TL direction
- 6 Tested in the biaxial loading machine
- 7 Tested in distilled water

TABLE 2. LOW AMPLITUDE TESTS

Material	Test Case	$\sigma_{y,max}$	$\sigma_{y,min}$	$\sigma_{x,max}$	$\sigma_{x,min}$	f	Notes
7075-T7351	47	12.0	8.4	12.0	8.4	5	
7075-T7351	48	12.0	8.4	-8.4	-12.0	5	
7075-T7351	49	12.0	8.4	6.0	4.2	10	
7075-T7351	50	12.0	8.4	-4.2	-8.4	8	
7075-T7351	11	12.0	8.4	0	0	15	1
7075-T7351	15	12.0	8.4	0	0	5	2
2024-T351	51	10.0	7.0	10.0	7.0	10	
2024-T351	52	10.0	7.0	-7.0	-10.0	10	
2024-T351	53	10.0	7.0	5.0	3.5	10	
2024-T351	54	10.0	7.0	-3.5	-5.0	10	
2024-T351	12	10.0	7.0	0	0	10	1
2024-T351	16	10.0	7.0	0	0	10	2

1 Interferometry photographs

2 TL direction



TABLE 3. CRACKS AT A CIRCULAR HOLE TESTS

Material	Test Case	$\sigma_{y,max}$	$\sigma_{y,min}$	$\sigma_{x,max}$	$\sigma_{x,min}$	f	Notes
7075-T7351	86	12.0	1.2	0	0	5	1
7075-T7351	85	12.0	1.2	0	0	5	2
7075-T7351	17	18.0	1.8	0	0	-	2 3 4
7075-T7351	19	18.0	1.8	18.0	1.8	-	2 4
7075-T7351	87	12.0	1.2	12.0	1.2	5	1
7075-T7351	89	12.0	1.2	12.0	1.2	5	2
7075-T7351	90	12.0	1.2	12.0	1.2	5	2
7075-T7351	88	12.0	1.2	-1.2	-12.0	5	1
7075-T7351	91	12.0	1.2	-1.2	-12.0	5	2
7075-T7351	92	12.0	1.2	-1.2	-12.0	5	2

1 0.25 inch diameter hole

2 0.75 inch diameter hole

3 CCT specimen

4 Crack initiation test

TABLE 4. VARIABLE AMPLITUDE TESTS

Material	Test Case	$\sigma_{y,max}$	$\sigma_{y,min}$	$\sigma_{x,max}$	$\sigma_{x,min}$	f	Notes
7075-T7351	99	12.0	1.2	0	0	10	1 2
7075-T7351	103	12.0	1.2	6.0	0.6	10	1 2
7075-T7351	104	12.0	1.2	6.0	0.6	10	1
7075-T7351	105	12.0	1.2	-0.6	-6.0	10	1 2
7075-T7351	114	30.0	-	0	0		3
7075-T7351	115	30.0	-	-	-15.0		3
7075-T7351	116	30.0	-	15.0	-		3
7075-T7351	200	30.0	-	-	-8.0		3 4
2024-T351	101	10.0	1.0	0	0	10	1 2
2024-T351	102	10.0	1.0	0	0	10	4 5 6
2024-T351	108	10.0	1.0	5.0	0.5	10	1 2
2024-T351	109	10.0	1.0	5.0	0.5	10	1
2024-T351	110	10.0	1.0	-0.5	-5.0	10	1 2

- 1 Periodic single overload, overload ratio = 2.0 (in both X and Y directions when applicable)
- 2 Interferometry photographs
- 3 Spectrum load. Cyclic frequencies vary (15Hz for low loads and 2Hz for high loads)
- 4 Tested in uniaxial loading machine
- 5 Periodic single overload, overload ratio = 1.67, 2.0
- 6 CCT specimen

TABLE 5. LOADING CONDITIONS FOR 180° OUT-OF-PHASE CYCLIC STRESS TESTS 1

Material	Test Case	B <span style="border: 1px solid black; padding: 0 2px;">2</span>	P <sub>y,max</sub>	P <sub>y,min</sub>	P <sub>x,max</sub>	P <sub>x,min</sub>	R	B @ $\omega t=90^\circ$	B @ $\omega t=270^\circ$	Notes
7075-T7351	39	1.0	24.27	8.59	24.21	8.66	0.1	.10	10.000	<span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>
7075-T7351	41	0.5	23.96	5.48	12.42	7.48	0.1	.05	5.000	<span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>
2024-T351	43	1.0	20.23	7.16	20.17	7.21	0.1	.10	10.000	<span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>
2024-T351	45	0.5	19.97	4.57	10.35	6.23	0.1	.05	5.000	<span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>
7075-T7351	94	1.0	28.01	22.78	27.99	22.80	0.7	.70	1.429	<span style="border: 1px solid black; padding: 0 2px;">5</span>
7075-T7351	72	0.5	25.83	19.67	16.20	14.55	0.7	.35	0.714	<span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>
7075-T7351	42	-0.5	21.47	13.44	-1.95	-7.38	0.7	-.35	-0.714	<span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>
7075-T7351	118	-1.0	19.29	10.33	-10.20	-19.17	0.7	-.70	-1.429	<span style="border: 1px solid black; padding: 0 2px;">6</span>
2024-T351	112	1.0	23.34	18.98	23.32	19.00	0.7	.70	1.429	<span style="border: 1px solid black; padding: 0 2px;">5</span>
2024-T351	106	0.5	21.52	16.39	13.50	12.13	0.7	.35	0.714	<span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>
2024-T351	46	-0.5	17.89	11.20	-1.63	-6.15	0.7	-.35	-0.714	<span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>
2024-T351	44	-1.0	16.07	8.61	-8.50	-15.97	0.7	-.70	-1.429	<span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>
7075-T7351	40	-1.0	17.40	1.70	-1.70	-17.40	0.1	-	-	<span style="border: 1px solid black; padding: 0 2px;">4</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>
7075-T7351	117	-1.0	17.40	12.20	-12.20	-17.40	0.7	-	-	<span style="border: 1px solid black; padding: 0 2px;">4</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>

1 10ksi at peak  $\sigma_y$  for 2024-T351 specimens, or 12ksi at peak  $\sigma_y$  for 7075-T7351 specimens

2 Nominal  $\sigma_x/\sigma_y$  ratio, occurs at  $\omega t=180^\circ$ . FOR (+B):  $\sigma_y$  is max &  $\sigma_x$  is min at  $\omega t=90^\circ$ ,  $\sigma_y$  is min &  $\sigma_x$  is max at  $\omega t=270^\circ$ . FOR (-B): Both  $\sigma_y$  &  $\sigma_x$  are max at  $\omega t=90^\circ$ , both  $\sigma_y$  &  $\sigma_x$  are min at  $\omega t=270^\circ$ .

3 Interferometry photographs

4 Load not adjusted

5  $f = 10\text{Hz}$

6  $f = 15\text{Hz}$

TABLE 6. MISCELLANEOUS TESTS

Material	Test Case	$\sigma_{y,max}$	$\sigma_{y,min}$	$\sigma_{x,max}$	$\sigma_{x,min}$	f	Notes
7075-T7351	95	12.0	1.2	6.0	6.0	5	1
7075-T7351	96	12.0	1.2	6.0	6.0	5	1
7075-T7351	97	12.0	1.2	-6.0	-6.0	5	1
7075-T7351	98	12.0	1.2	-6.0	-6.0	5	1
7075-T7351	79	12.0	1.2	0	0	5	2
7075-T7351	81	12.0	1.2	12.0	1.2	5	2
7075-T7351	83	12.0	1.2	-1.2	-12.0	5	2
7075-T7351	150	-	-	-	-	-	3
7075-T7351	123	-	-	-	-	-	3 4
7075-T7351	125	-	-	-	-	-	3 4 5
2024-T351	127	-	-	-	-	-	3 4
2024-T351	129	-	-	-	-	-	3 4 5

- 1 Sustained load test
- 2 Angle crack test, crack line oriented at 45° with respect to loading axes and sheet rolling direction.
- 3 Fracture test (monotonically loaded to failure), tested in uniaxial loading machine.
- 4 CCT specimen
- 5 TL direction

The following notes are applicable to pages 54 through 583.

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\* FLAW TYPE \*

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- 0 — NO FLAW
- 1 — EDM SLOT (.100 X .020) IN TRANSVERSE DIRECTION
- 2 — EDM SLOT (.100 X .020) IN LONGITUDINAL DIRECTION
- 3 — 45 DEGREE ANGLE EDM SLOT (.100 X .020)
- 4 — 0.250 HOLE WITH .010 EDM NICK ON EACH SIDE
- 5 — 0.750 HOLE WITH .010 EDM NICK ON EACH SIDE
- 6 — 0.750 HOLE, NO EDM NICK

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CRACK GROWTH TEST OF 7075-T7 TEST CASE 70 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-65 FLAW TYPE - 1

TEMP = 71 F

REL HUM = 48 %

09/11/77

B = .18 IN

R(L) = .1

R(T) = .1

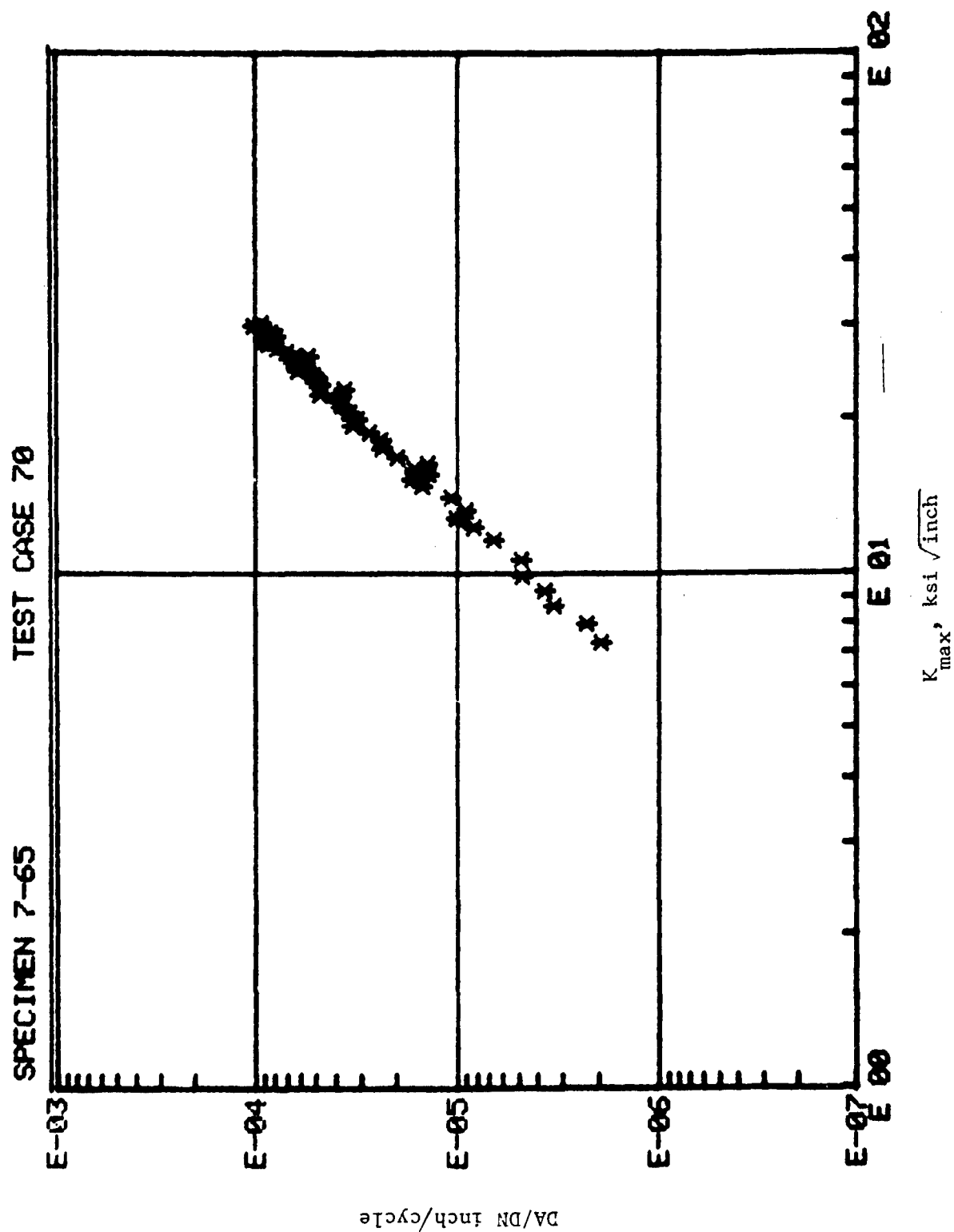
FREQ = 8 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

BIAXIAL RATIO = -1.5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	14.31	-29.06	0	2.2	2.1	180	0
2	14.31	-29.06	11600	2.5	2.7	180	0
3	14.31	-29.06	21400	3	3.1	180	0
4	14.31	-29.06	29700	3.5	3.7	180	0
5	14.31	-29.06	36510	4	4.2	180	0
6	14.31	-29.06	41750	4.5	4.7	180	0
7	14.31	-29.06	51570	5.5	5.6	180	0
8	14.31	-29.06	59100	6.5	6.6	180	0
9	14.31	-29.06	62400	7	7.2	180	0
10	14.31	-29.06	65120	7.5	7.8	180	0
11	14.31	-29.06	67900	8	8.3	180	0
12	14.31	-29.06	74850	9.5	9.8	180	0
13	14.31	-29.06	76350	10	10.2	180	0
14	14.31	-29.06	78000	10.5	10.8	180	0
15	14.31	-29.06	79800	11	11.3	180	0
16	14.31	-29.06	81500	11.6	11.8	180	0
17	14.31	-29.06	83100	12	12.3	180	0
18	14.31	-29.06	85750	13	13.4	180	0
19	14.31	-29.06	87870	14	14.4	179	0
20	14.31	-29.06	89960	15	15.4	178	0
21	14.31	-29.06	91810	16	16.4	178	0
22	14.31	-29.06	93420	17	17.5	178	0
23	14.31	-29.06	95090	18	18.6	178	0
24	14.31	-29.06	96620	19	19.7	178	0
25	14.31	-29.06	97960	20	20.7	177	0
26	14.31	-29.06	99190	21	21.6	178	1
27	14.31	-29.06	100290	22	22.7	178	0
28	14.31	-29.06	101600	23	23.6	178	0
29	14.31	-29.06	102550	24	24.4	178	0
30	14.31	-29.06	103610	25	25.5	178	0
31	14.31	-29.06	104770	26.2	26.7	178	0
32	14.31	-29.06	105420	27	27.5	178	0
33	14.31	-29.06	106220	28	28.3	178	0
34	14.31	-29.06	107390	29.5	29.8	178	0
35	14.31	-29.06	107780	30	30.3	178	0
36	14.31	-29.06	108560	31	31	178	0
37	14.31	-29.06	109390	32	32.3	178	0
38	14.31	-29.06	110090	33	33.5	178	1
39	14.31	-29.06	110760	34	34.8	178	1
40	14.31	-29.06	111370	35	36	178	1
41	14.31	-29.06	112060	36	37.2	178	1
42	14.31	-29.06	112770	37	38.6	178	1
43	14.31	-29.06	113410	38	39.9	178	1
44	14.31	-29.06	113930	39	41	178	1
45	14.31	-29.06	114520	40	42.2	178	1

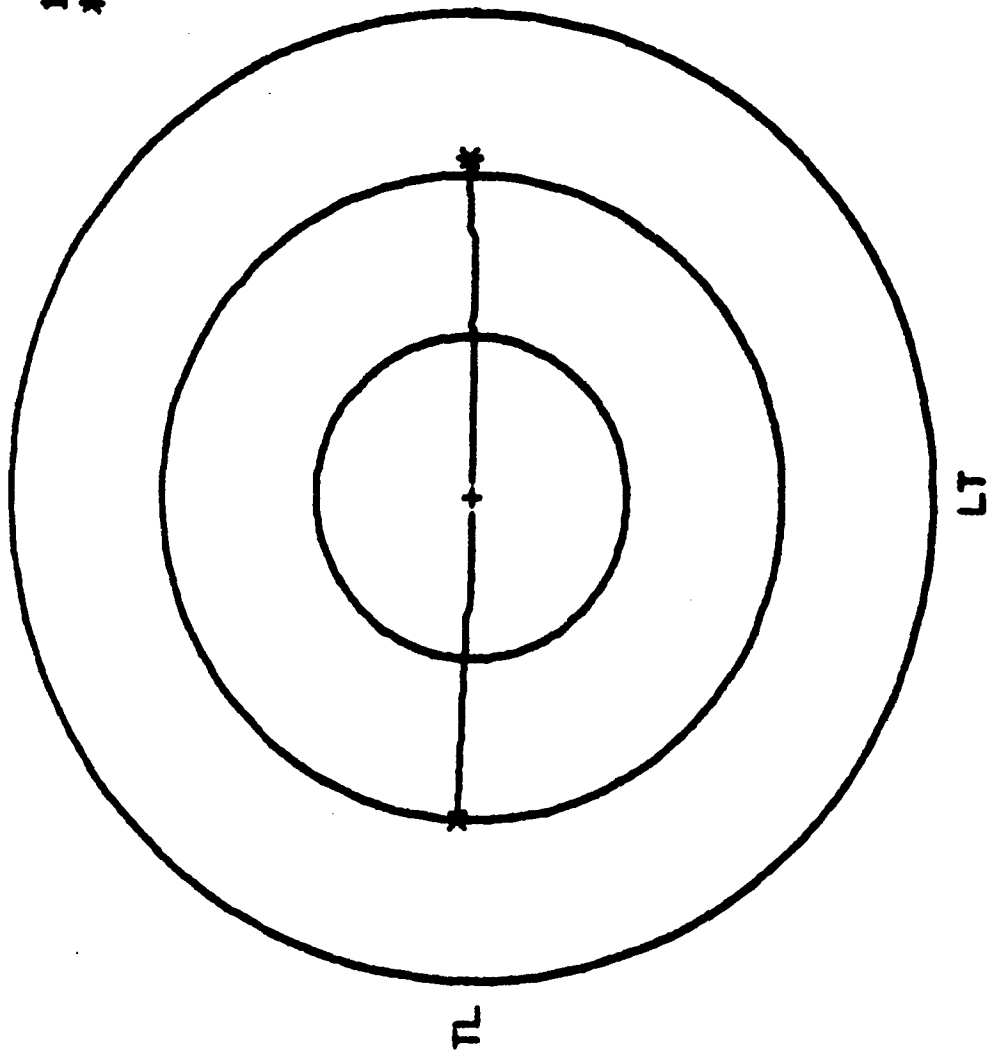




SPECIMEN 7-65

TEST CASE 70

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 7075-T7 TEST CASE 25 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC 7-23 FLAW TYPE - 1

TEMP = 77 F REL HUM = 59 % 5-12-78

B = .181 IN R(L) = .1 R(T) = .1

FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

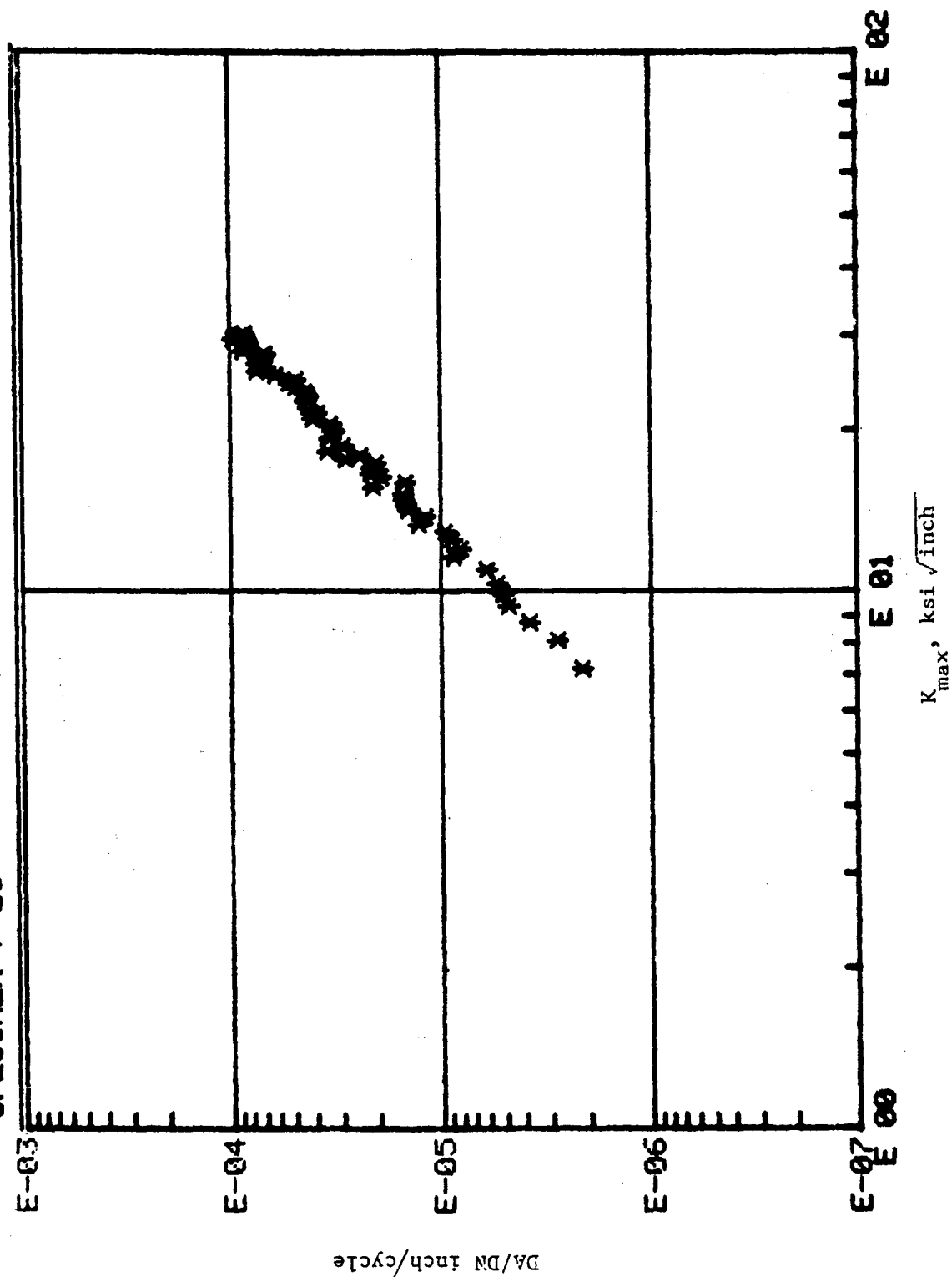
BIAXIAL RATIO = -1

REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.37	-17.37	0	1.8	2	184	0
2	17.37	-17.37	18620	2.5	2.9	184	0
3	17.37	-17.37	26630	3	3.3	183	0
4	17.37	-17.37	33900	3.5	3.9	183	0
5	17.37	-17.37	38650	4	4.3	184	0
6	17.37	-17.37	42590	4.3	4.8	183	0
7	17.37	-17.37	46760	4.8	5.2	183	-1
8	17.37	-17.37	52980	5.5	6	182	-2
9	17.37	-17.37	55590	6	6.4	182	-3
10	17.37	-17.37	58680	6.5	6.9	182	-3
11	17.37	-17.37	61770	7	7.5	182	-3
12	17.37	-17.37	64120	7.5	7.9	182	-3
13	17.37	-17.37	66080	8	8.4	182	-3
14	17.37	-17.37	68190	8.5	8.9	182	-3
15	17.37	-17.37	69950	9	9.4	182	-3
16	17.37	-17.37	71650	9.5	9.9	181	-3
17	17.37	-17.37	72640	9.9	10.1	181	-3
18	17.37	-17.37	74960	10.5	10.9	181	-3
19	17.37	-17.37	76150	11	11.4	181	-2
20	17.37	-17.37	77860	11.5	11.9	180	-2
21	17.37	-17.37	79020	12	12.3	180	-2
22	17.37	-17.37	90300	12.5	12.9	180	-2
23	17.37	-17.37	91360	13	13.3	180	-2
24	17.37	-17.37	82710	13.5	13.9	180	-2
25	17.37	-17.37	93500	14	14.3	180	-2
26	17.37	-17.37	84640	14.5	14.9	180	-2
27	17.37	-17.37	85220	15	15.2	181	-3
28	17.37	-17.37	87180	16	16.5	180	-3
29	17.37	-17.37	88810	17	17.7	180	-3
30	17.37	-17.37	90200	18	18.5	180	-3
31	17.37	-17.37	91760	19	19.6	180	-3
32	17.37	-17.37	92620	19.7	20.3	180	-3
33	17.37	-17.37	94240	21	21.5	180	-3
34	17.37	-17.37	95590	22	22.8	181	-3
35	17.37	-17.37	96610	23	23.6	181	-3
36	17.37	-17.37	97780	24	24.6	181	-3
37	17.37	-17.37	98690	25	25.2	180	-3
38	17.37	-17.37	99760	26	26.3	180	-3
39	17.37	-17.37	100620	27	27.1	180	-3
40	17.37	-17.37	101600	28	28	180	-3
41	17.37	-17.37	102430	29	29	180	-3
42	17.37	-17.37	103110	30	30	180	-3
43	17.37	-17.37	103810	31	30.9	180	-3
44	17.37	-17.37	104450	32	31.8	180	-3
45	17.37	-17.37	105090	33	32.6	180	-3
46	17.37	-17.37	105700	34	33.3	180	-3
47	17.37	-17.37	106360	35	34.1	180	-3
48	17.37	-17.37	106910	36	35	180	-3
49	17.37	-17.37	107460	37	35.8	180	-3
50	17.37	-17.37	107980	38	36.5	180	-3

REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	17.37	-17.37	108498	39	37.2	180	-2
52	17.37	-17.37	108998	40	38.1	180	-2
53	17.37	-17.37	109558	41	39.1	180	-2
54	17.37	-17.37	110148	42	40.1	180	-2

TEST CASE 25

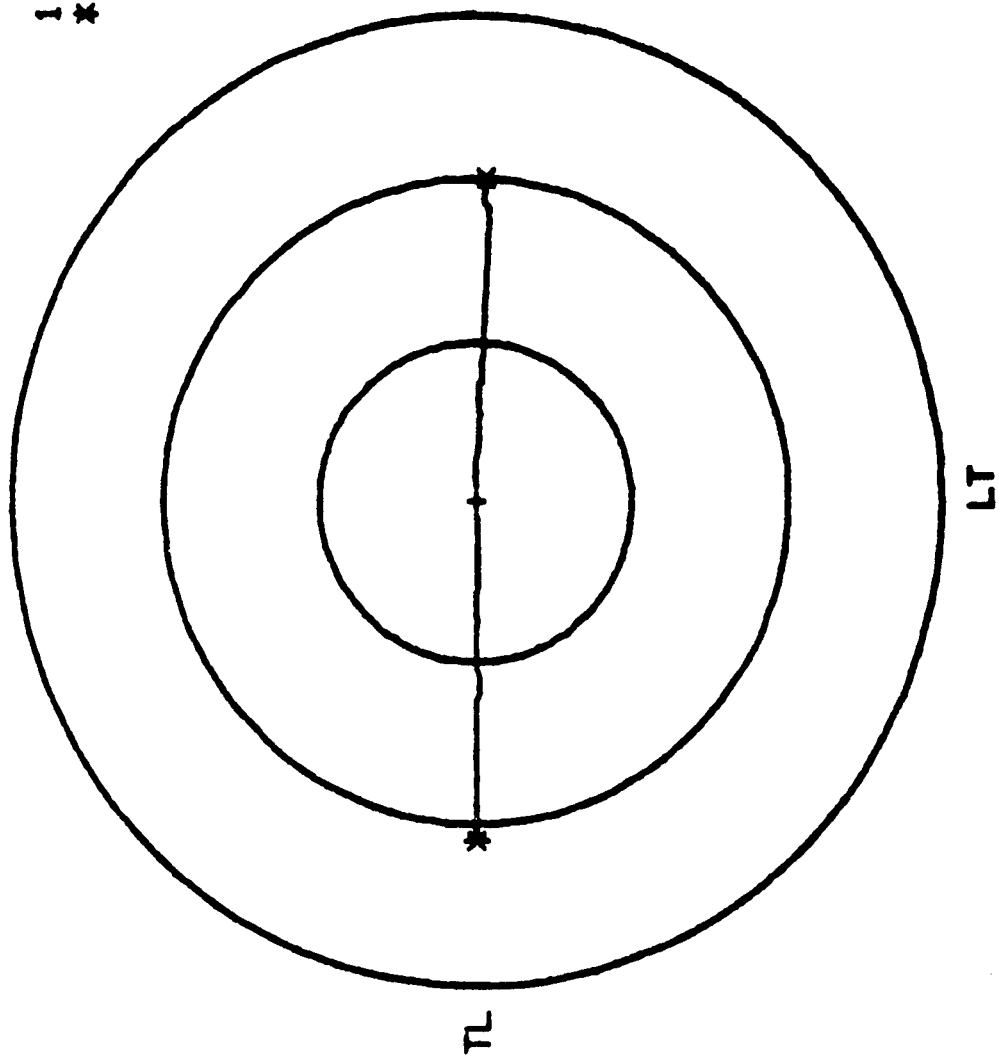
SPECIMEN 7-23



SPECIMEN 7-23

TEST CASE 25

1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 26 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-49 FLAW TYPE - 1  
TEMP = 78 F REL HUM = 44 % 7/5/77  
B = .1735 IN R(L) = .1 R(T) = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -1  
-----

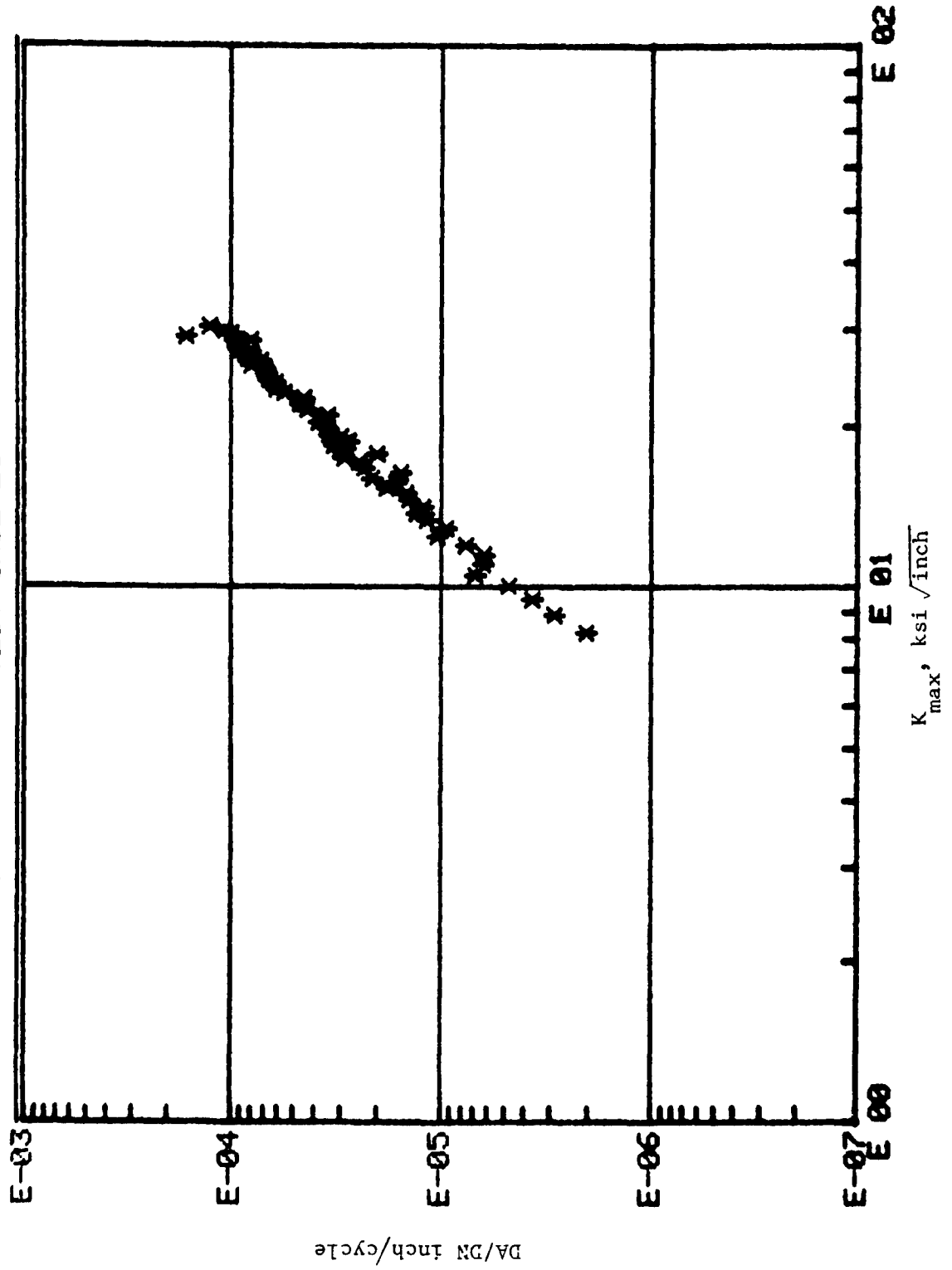
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.4	-17.4	0	3	2.5	180	-5
2	17.4	-17.4	12220	3.5	3	180	-4
3	17.4	-17.4	20870	4	3.5	180	-4
4	17.4	-17.4	27680	4.5	4	180	-3
5	17.4	-17.4	32420	5	4.4	180	-3
6	17.4	-17.4	36050	5.5	4.9	180	-3
7	17.4	-17.4	40000	6	5.4	180	-3
8	17.4	-17.4	44000	6.5	5.9	180	-3
9	17.4	-17.4	47300	7	6.4	180	-2
10	17.4	-17.4	49920	7.5	7	180	-2
11	17.4	-17.4	52310	8	7.4	180	-2
12	17.4	-17.4	54660	8.5	8	180	-2
13	17.4	-17.4	56560	9	8.5	180	-2
14	17.4	-17.4	58620	9.5	9	180	-2
15	17.4	-17.4	60550	10	9.6	180	-2
16	17.4	-17.4	62080	10.5	10	180	-2
17	17.4	-17.4	63450	11	10.5	180	-2
18	17.4	-17.4	64970	11.5	11	180	-2
19	17.4	-17.4	66020	12	11.4	180	-2
20	17.4	-17.4	67790	12.5	12	180	-1
21	17.4	-17.4	68860	13	12.5	180	-2
22	17.4	-17.4	70290	13.7	13.2	180	-2
23	17.4	-17.4	70900	14	13.6	180	-2
24	17.4	-17.4	72140	14.5	14.1	180	-2
25	17.4	-17.4	73140	15	14.0	180	-2
26	17.4	-17.4	73840	15.5	15.2	180	-2
27	17.4	-17.4	74750	16	15.7	180	-2
28	17.4	-17.4	75500	16.5	16.1	179	-2
29	17.4	-17.4	76230	17	16.6	179	-2
30	17.4	-17.4	77810	18	17.0	179	-2
31	17.4	-17.4	79190	19	18.9	179	-2
32	17.4	-17.4	80630	20	19.9	179	-2
33	17.4	-17.4	81660	21	20.7	178	-2
34	17.4	-17.4	82790	22	21.0	178	-2
35	17.4	-17.4	83800	23	22.6	178	-2
36	17.4	-17.4	84700	24	23.6	178	-2
37	17.4	-17.4	85490	25	24.5	178	-2
38	17.4	-17.4	86310	26	25.5	178	-2
39	17.4	-17.4	87150	27	26.7	178	-2
40	17.4	-17.4	87890	28	27.7	178	-2
41	17.4	-17.4	88650	29	28.0	178	-2
42	17.4	-17.4	89330	30.1	29.9	178	-2
43	17.4	-17.4	89890	31	30.6	178	-2
44	17.4	-17.4	90500	32	31.5	178	-2
45	17.4	-17.4	91090	33	32.5	178	-2
46	17.4	-17.4	91680	34	33.6	178	-2
47	17.4	-17.4	92190	35	34.5	178	-2
48	17.4	-17.4	92780	36.1	35.6	178	-2
49	17.4	-17.4	93340	37	36.5	178	-2
50	17.4	-17.4	93680	38	37.7	178	-2



REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	17.4	-17.4	94180	39	38.7	178	-2
52	17.4	-17.4	94670	40	39.8	178	-2
53	17.4	-17.4	95070	41	40.8	178	-2

SPECIMEN 7-49

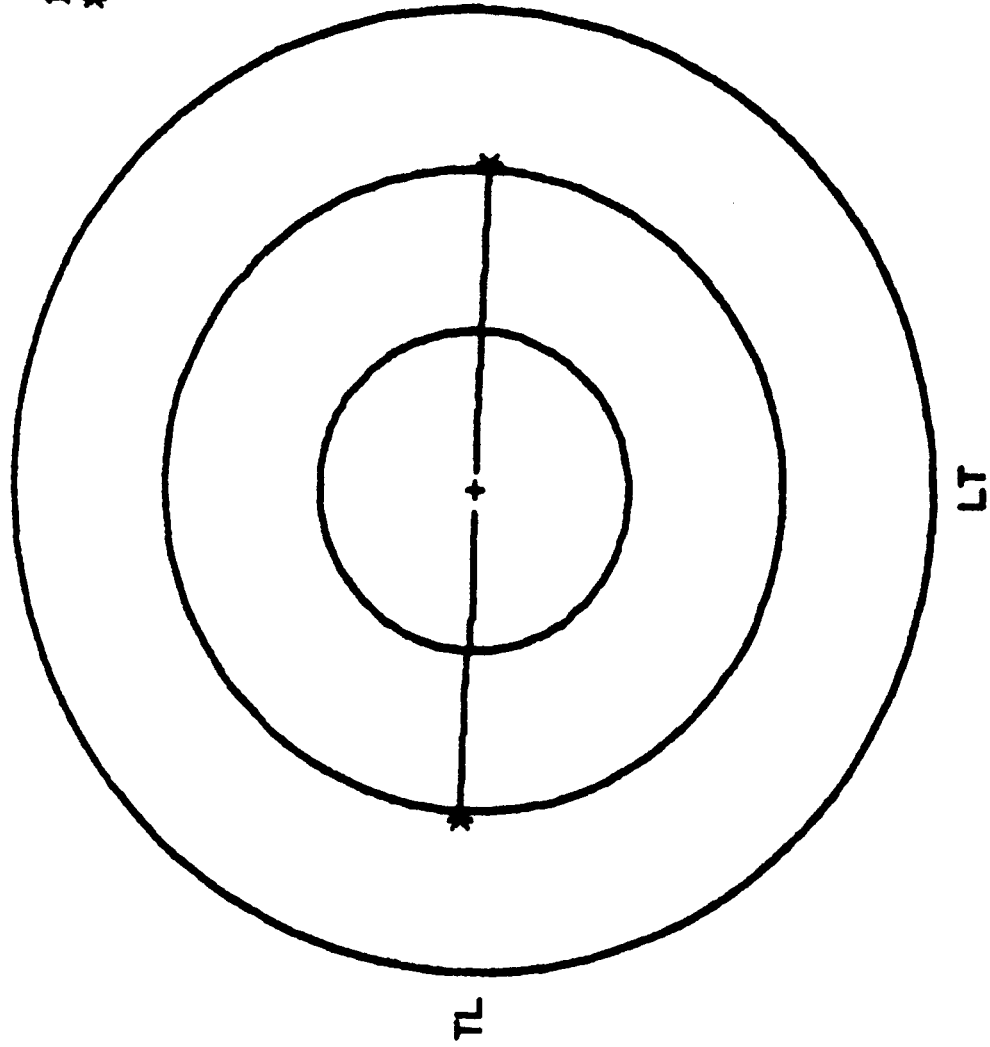
TEST CASE 26



SPECIMEN 7-49

TEST CASE 26

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 56 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC 7-34 FLAW TYPE - 1

TEMP = 76 F REL HUM = 59 % 05-119-78

B = .174 IN R(L) = 1 R(T) = .1

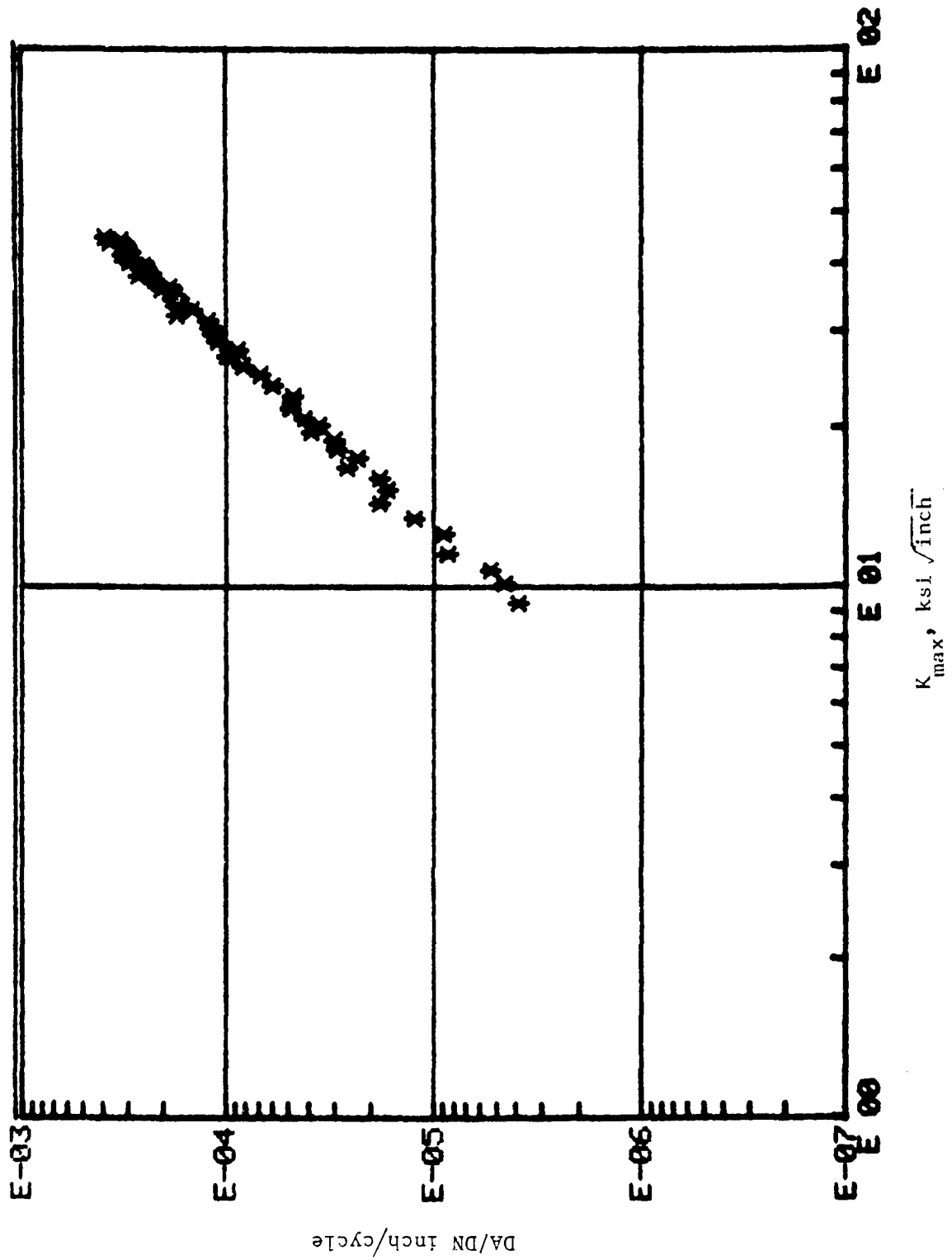
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = -1

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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	26.05	-26.05	0	1.6	1.5	180	0
2	26.05	-26.05	4460	2	1.8	180	0
3	26.05	-26.05	7740	2.3	2.1	180	-1
4	26.05	-26.05	9610	2.5	2.3	180	-1
5	26.05	-26.05	12850	3	2.9	180	-1
6	26.05	-26.05	15380	3.5	3.3	180	-2
7	26.05	-26.05	17200	4	3.7	180	-3
8	26.05	-26.05	18700	4.5	4.3	180	-3
9	26.05	-26.05	20050	5	4.7	180	-3
10	26.05	-26.05	21700	5.6	5.3	180	-4
11	26.05	-26.05	22470	6	5.7	180	-4
12	26.05	-26.05	23440	6.5	6.1	179	-4
13	26.05	-26.05	24380	7	6.7	179	-4
14	26.05	-26.05	25210	7.5	7.2	178	-4
15	26.05	-26.05	25850	8	7.7	178	-4
16	26.05	-26.05	26480	8.5	8.1	178	-5
17	26.05	-26.05	27080	9	8.6	178	-5
18	26.05	-26.05	28000	10	9.4	178	-5
19	26.05	-26.05	29110	11	10.5	177	-5
20	26.05	-26.05	29990	12	11.6	177	-5
21	26.05	-26.05	30690	13	12.5	177	-5
22	26.05	-26.05	31320	14	13.6	177	-5
23	26.05	-26.05	31780	15	14.4	177	-5
24	26.05	-26.05	32410	16.1	15.5	177	-5
25	26.05	-26.05	32850	17	16.5	177	-5
26	26.05	-26.05	33270	18	17.4	177	-5
27	26.05	-26.05	33690	19	18.4	177	-5
28	26.05	-26.05	34120	20	19.5	177	-5
29	26.05	-26.05	34410	21	20.5	178	-5
30	26.05	-26.05	34740	22	21.4	178	-4
31	26.05	-26.05	35050	23	22.4	178	-4
32	26.05	-26.05	35300	24	23.2	178	-4
33	26.05	-26.05	35600	25	24.3	178	-4
34	26.05	-26.05	35870	26.2	25.3	179	-3
35	26.05	-26.05	36100	27	26.2	179	-3
36	26.05	-26.05	36340	28	27.3	179	-3
37	26.05	-26.05	36530	29.1	28.2	179	-3
38	26.05	-26.05	36690	30	28.8	179	-3
39	26.05	-26.05	36880	31	29.6	179	-3
40	26.05	-26.05	37080	32	30.6	179	-3
41	26.05	-26.05	37260	33	31.7	179	-3
42	26.05	-26.05	37430	34	32.6	179	-3
43	26.05	-26.05	37580	35	33.5	179	-3
44	26.05	-26.05	37760	36	34.6	179	-3
45	26.05	-26.05	37910	37	35.4	179	-3
46	26.05	-26.05	38060	38	36.3	179	-3
47	26.05	-26.05	38190	39	37.2	179	-3
48	26.05	-26.05	38330	40	38	179	-3
49	26.05	-26.05	38460	41	39	179	-3

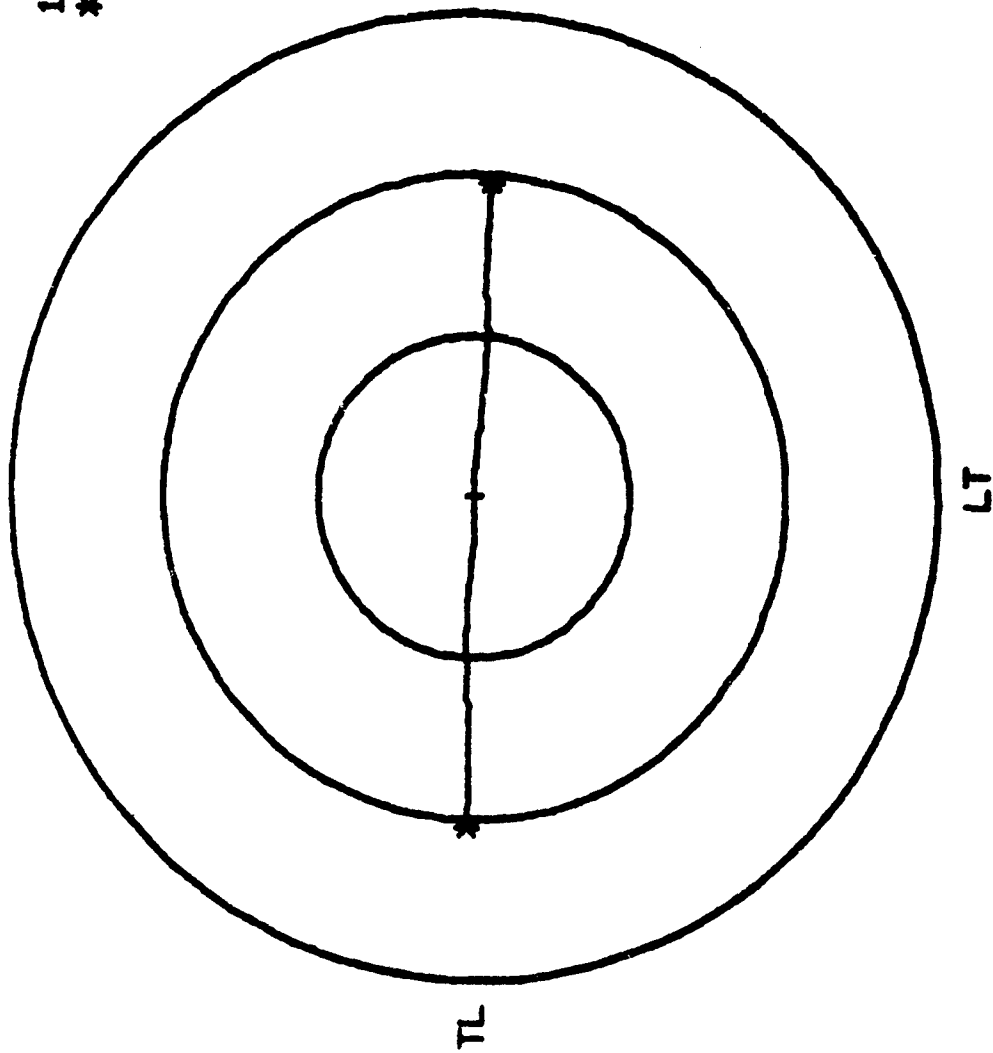
SPECIMEN 7-34 TEST CASE 56



SPECIMEN 7-34

TEST CASE 56

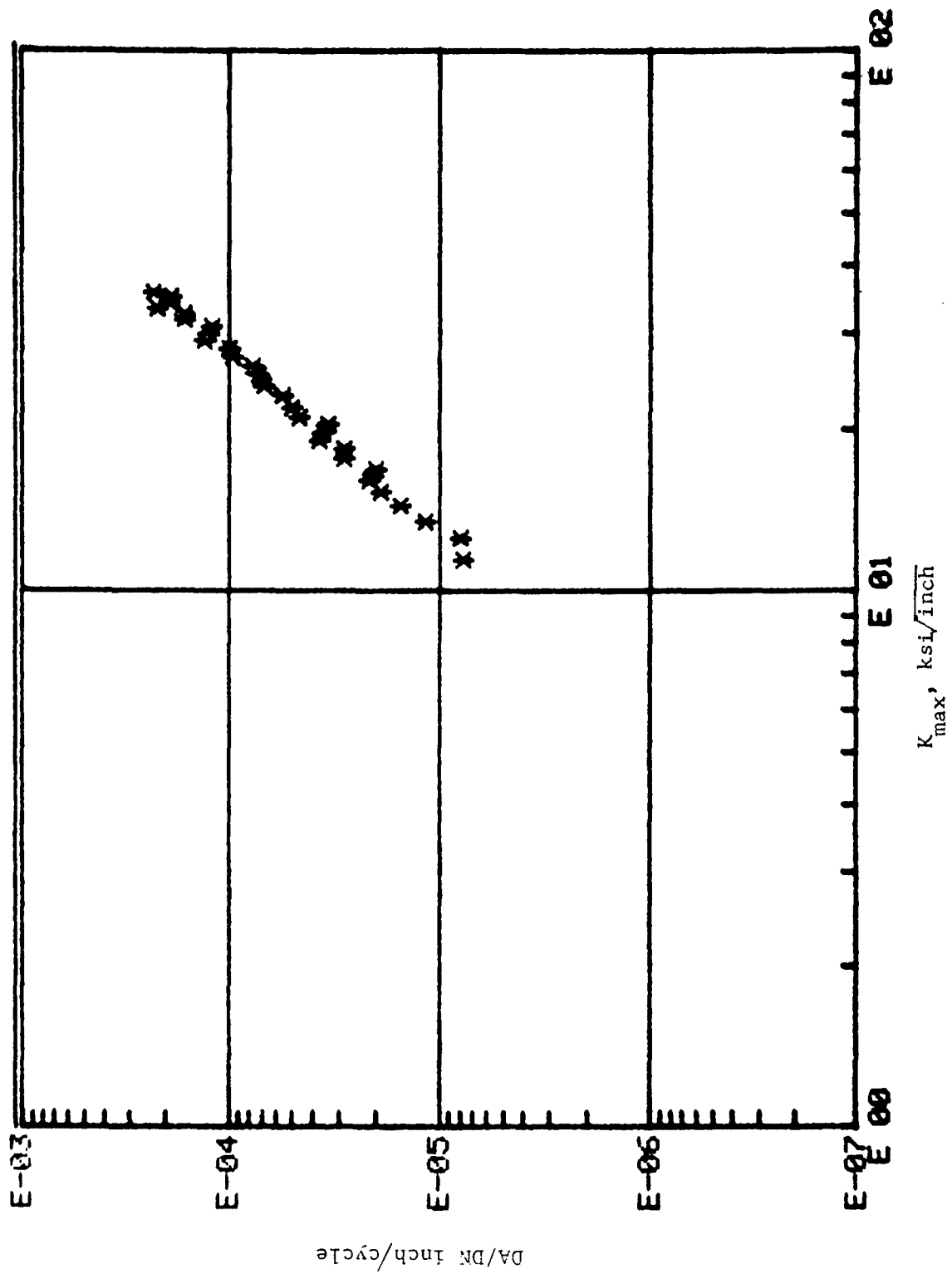
1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 58 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-19 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 46 % 03/25/77  
B = .176 IN R(L) = .1 R(T) = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
-----



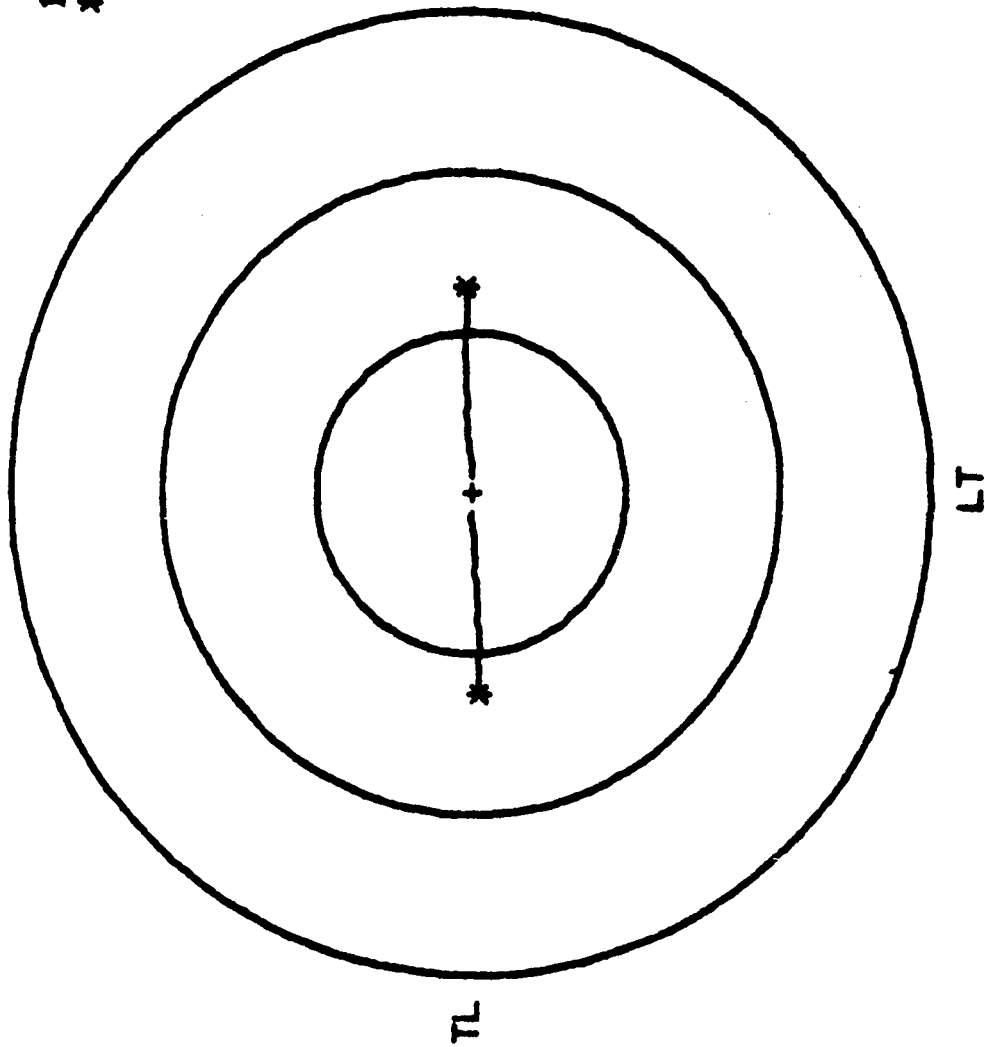
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	30.8	-8.23	0	2.5	2.1	180	0
2	30.8	-8.23	3860	3	2.8	181	0
3	30.8	-8.23	6700	3.5	3.2	182	1
4	30.8	-8.23	8850	4	3.7	184	1
5	30.8	-8.23	10630	4.5	4.3	184	2
6	30.8	-8.23	11950	5	4.8	185	3
7	30.8	-8.23	13100	5.5	5.3	185	4
8	30.8	-8.23	14350	6	5.8	185	4
9	30.8	-8.23	15410	6.6	6.4	184	4
10	30.8	-8.23	16120	7	6.8	184	4
11	30.8	-8.23	16860	7.5	7.4	184	4
12	30.8	-8.23	17560	8	7.9	184	4
13	30.8	-8.23	18300	8.5	8.4	184	4
14	30.8	-8.23	18900	9	9	184	4
15	30.8	-8.23	19900	10	10	183	4
16	30.8	-8.23	20750	11	10.9	184	3
17	30.8	-8.23	21450	12	11.8	184	3
18	30.8	-8.23	22150	13	12.8	184	3
19	30.8	-8.23	22800	14	13.8	184	3
20	30.8	-8.23	23350	15	14.9	184	3
21	30.8	-8.23	23900	16	16.1	183	3
22	30.8	-8.23	24300	17.1	17.1	184	3
23	30.8	-8.23	24680	18	18.1	184	3
24	30.8	-8.23	25120	19	19.2	184	3
25	30.8	-8.23	25460	20	20.4	184	3
26	30.8	-8.23	25770	21	21.4	183	2
27	30.8	-8.23	26020	22	22.6	183	2
28	30.8	-8.23	26330	23.2	23.8	183	2
29	30.8	-8.23	26570	24	24.8	183	2
30	30.8	-8.23	26790	25	25.8	183	2



SPECIMEN 7-19

TEST CASE 58

1 IN SPACING  
\* TEST STOPPED

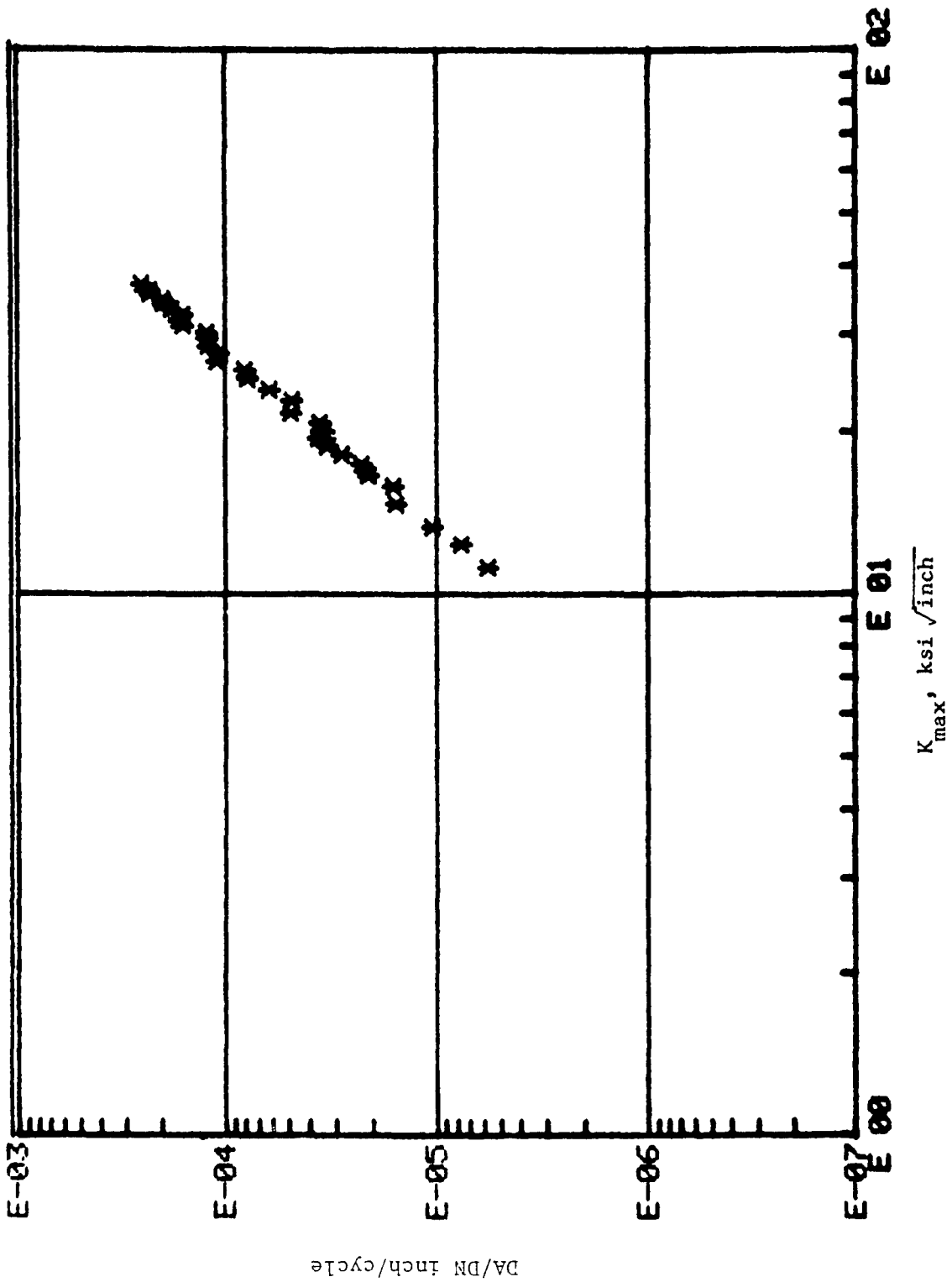


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CRACK GROWTH TEST OF 7075-T7 TEST CASE 135 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-47 FLAW TYPE - 1  
TEMP = 72 F REL HUM = 45 % 09/16/77  
B = .175 IN R(L) = .1 R(T) = .1  
FREQ = 2 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	30.8	-8.23	0	2.4	2.1	180	0
2	30.8	-8.23	4800	3	2.6	180	0
3	30.8	-8.23	8100	3.5	3.1	180	0
4	30.8	-8.23	10500	4	3.6	180	0
5	30.8	-8.23	13700	5	4.6	180	0
6	30.8	-8.23	15100	5.5	5	180	1
7	30.8	-8.23	16400	6	5.6	180	0
8	30.8	-8.23	17500	6.5	6.1	180	0
9	30.8	-8.23	18400	7	6.6	180	0
10	30.8	-8.23	19010	7.5	6.9	180	0
11	30.8	-8.23	19770	8	7.5	180	0
12	30.8	-8.23	20500	8.5	8	180	0
13	30.8	-8.23	21200	9	8.5	180	0
14	30.8	-8.23	22100	10	9.4	180	0
15	30.8	-8.23	23270	11	10.5	180	0
16	30.8	-8.23	24130	12	11.6	180	0
17	30.8	-8.23	24800	13	12.7	181	0
18	30.8	-8.23	25330	14	13.4	182	0
19	30.8	-8.23	25790	15	14.4	182	0
20	30.8	-8.23	26210	16	15.2	182	0
21	30.8	-8.23	26670	17.1	16.3	181	0
22	30.8	-8.23	27020	18	17.1	181	0
23	30.8	-8.23	27410	19	18	181	0
24	30.8	-8.23	27730	20	19	181	0
25	30.8	-8.23	28020	21	19.9	181	0
26	30.8	-8.23	28320	22	20.8	181	0
27	30.8	-8.23	28570	23	21.6	181	0
28	30.8	-8.23	28840	24	22.7	181	0
29	30.8	-8.23	29080	25	23.6	181	0
30	30.8	-8.23	29310	26	24.7	181	0
31	30.8	-8.23	29530	27	25.7	181	0
32	30.8	-8.23	29730	28	26.7	181	0

SPECIMEN 7-47

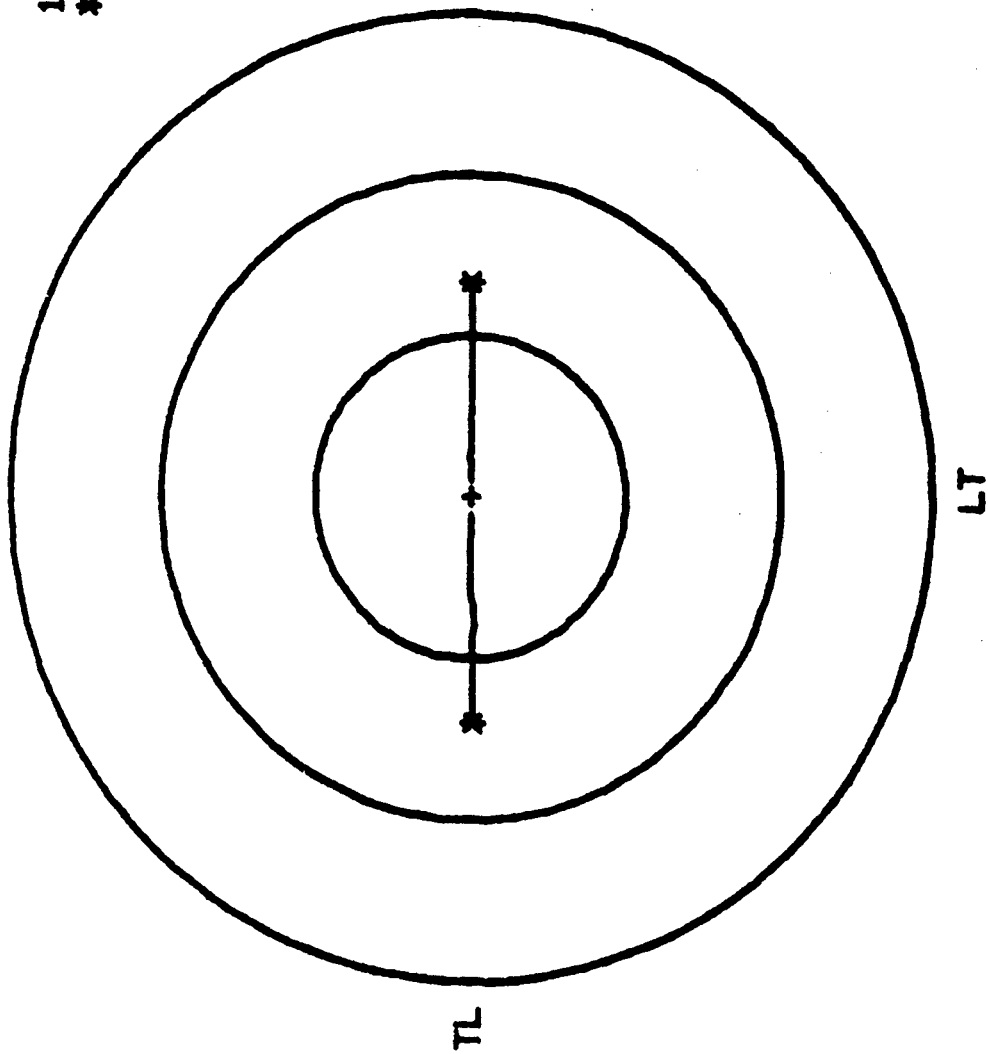
TEST CASE 135



SPECIMEN 7-47

TEST CASE 135

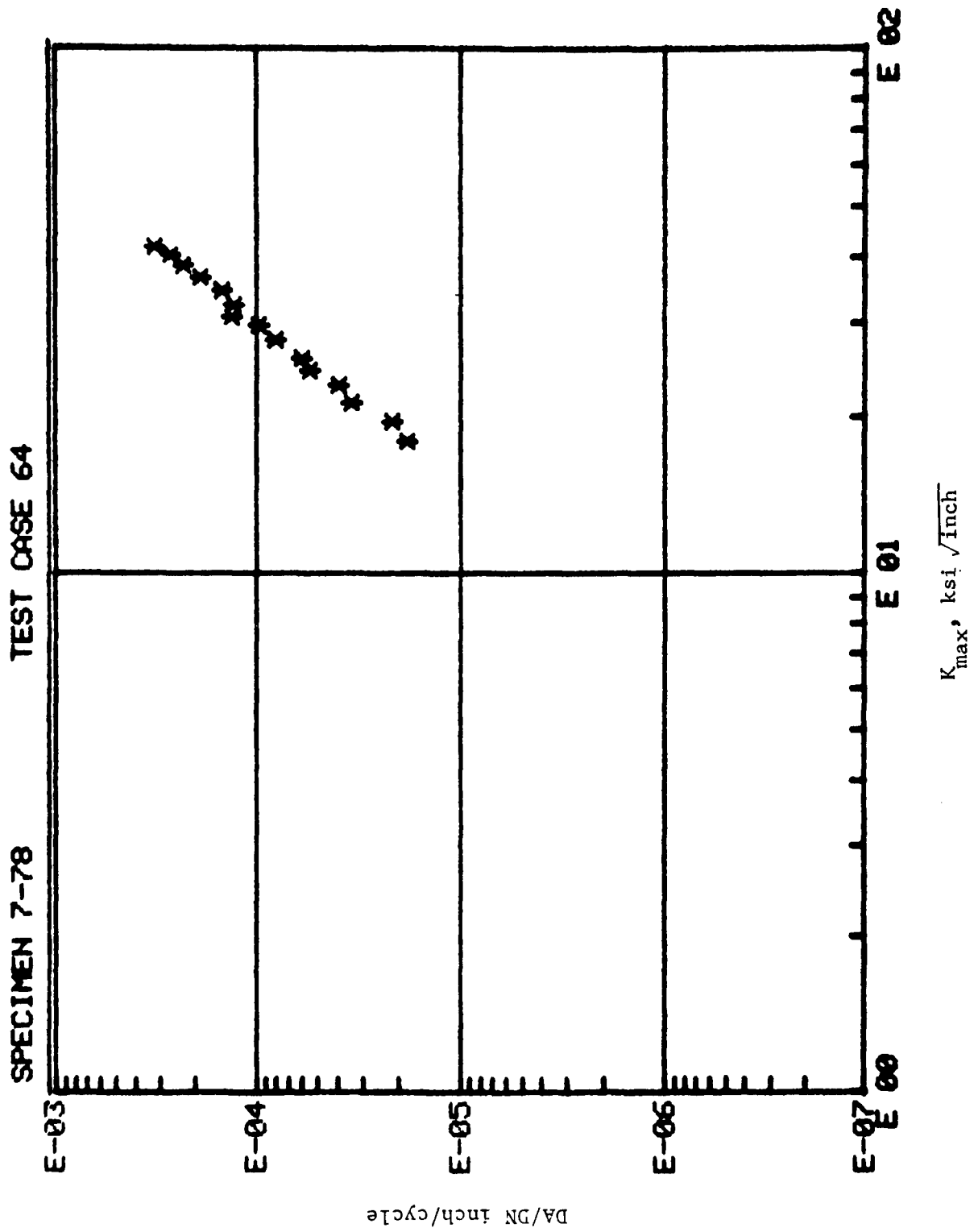
1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 64 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-78 FLAW TYPE - 1  
TEMP = 78 F REL HUM = 46 % 08/25/77  
B = .171 IN R(L) = .1 R(T) = .1  
FREQ = 2 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
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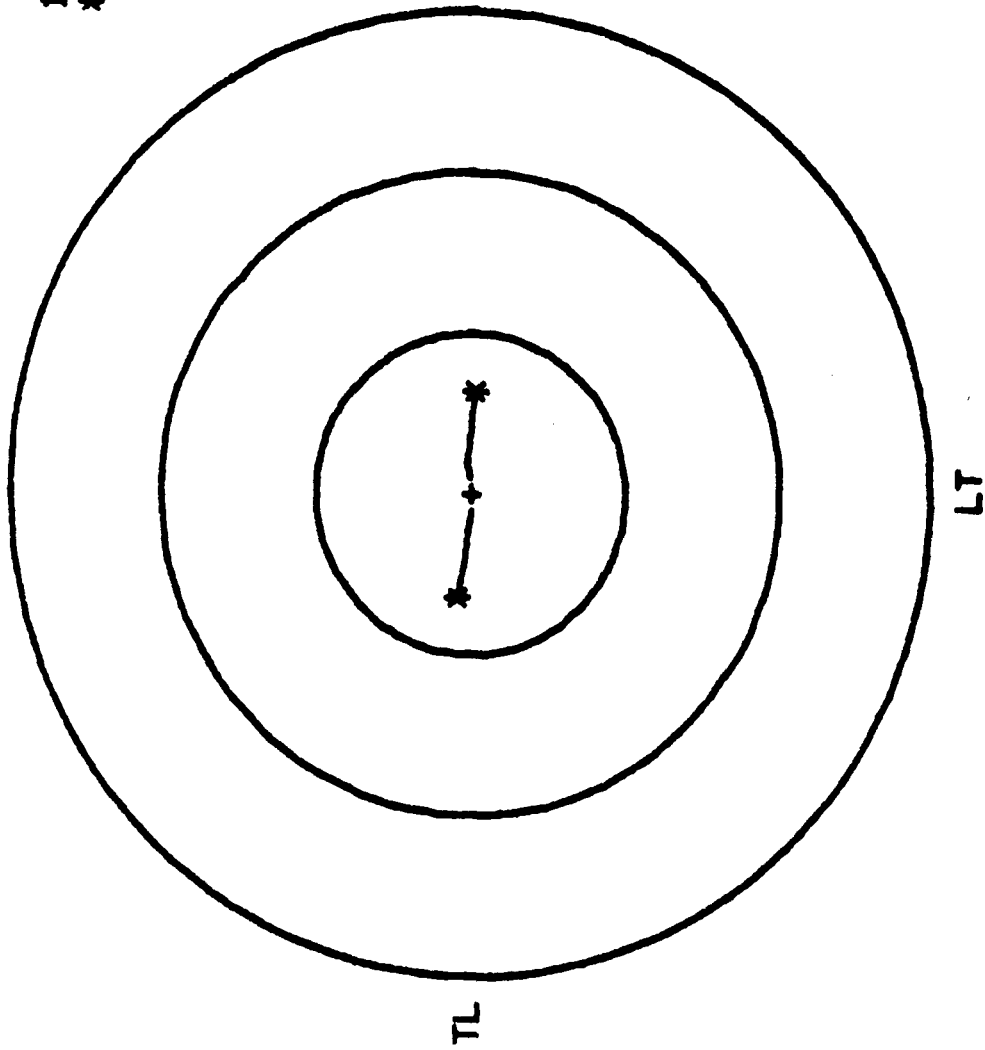
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	51.34	-13.72	0	2.1	2.1	181	2
2	51.34	-13.72	1100	2.5	2.5	181	3
3	51.34	-13.72	2250	3	3	180	5
4	51.34	-13.72	2910	3.5	3.4	178	5
5	51.34	-13.72	3610	4	4	177	7
6	51.34	-13.72	4020	4.5	4.4	176	5
7	51.34	-13.72	4480	5	5	176	4
8	51.34	-13.72	5100	6	6	177	2
9	51.34	-13.72	5360	6.5	6.5	176	1
10	51.34	-13.72	5550	7	7	176	1
11	51.34	-13.72	5920	8	7.9	176	0
12	51.34	-13.72	6260	9	8.9	175	0
13	51.34	-13.72	6540	10	10	174	0
14	51.34	-13.72	6760	11	11	174	-1
15	51.34	-13.72	6940	12	11.9	173	-1
16	51.34	-13.72	7090	13	12.8	173	-2



SPECIMEN 7-78

TEST CASE 64

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 29 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-58 FLAW TYPE - 1

TEMP = 75 F REL HUM = 50 % 08/04/77

B = .173 IN R(L) = .1 R(T) = 1

FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = -.5

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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	20.54	-5.49	0	2.2	2.3	180	0
2	20.54	-5.49	5790	2.5	2.5	180	0
3	20.54	-5.49	15600	3	3	180	0
4	20.54	-5.49	23280	3.5	3.4	180	0
5	20.54	-5.49	28340	4	3.9	180	0
6	20.54	-5.49	34250	4.5	4.4	180	0
7	20.54	-5.49	37550	5	5	180	0
8	20.54	-5.49	41720	5.5	5.6	180	0
9	20.54	-5.49	44440	6	6	180	0
10	20.54	-5.49	48160	6.5	6.5	179	-1
11	20.54	-5.49	50360	7	7.1	179	-1
12	20.54	-5.49	53060	7.5	7.7	179	-1
13	20.54	-5.49	54640	8	8.1	179	-1
14	20.54	-5.49	56730	8.5	8.7	179	-1
15	20.54	-5.49	58380	9	9	179	-1
16	20.54	-5.49	60130	9.5	9.7	179	-1
17	20.54	-5.49	61420	10	10.1	179	-1
18	20.54	-5.49	63190	10.5	10.9	179	-1
19	20.54	-5.49	64070	11	11.2	179	-1
20	20.54	-5.49	65590	11.5	11.9	179	-1
21	20.54	-5.49	66430	12	12.2	179	-2
22	20.54	-5.49	67760	12.5	13	179	-2
23	20.54	-5.49	68780	13	13.2	179	-2
24	20.54	-5.49	69560	13.5	13.6	179	-2
25	20.54	-5.49	70430	14	14.1	179	-2
26	20.54	-5.49	71390	14.5	14.9	179	-2
27	20.54	-5.49	72140	15	15.2	179	-2
28	20.54	-5.49	73670	16	16.2	179	-2
29	20.54	-5.49	75170	17.1	17.3	178	-2
30	20.54	-5.49	76320	18	18.2	178	-2
31	20.54	-5.49	77710	19	19.4	178	-2
32	20.54	-5.49	78940	20.1	20.4	178	-2
33	20.54	-5.49	79740	21	21.3	178	-2
34	20.54	-5.49	80800	22	22.2	178	-2
35	20.54	-5.49	81770	23	23.2	178	-2
36	20.54	-5.49	82650	24	24.3	178	-2
37	20.54	-5.49	83390	25	25.2	178	-2
38	20.54	-5.49	84190	26	26.3	178	-2
39	20.54	-5.49	84900	27	27.4	178	-2
40	20.54	-5.49	85540	28	28.4	178	-2
41	20.54	-5.49	86200	29	29.4	178	-2
42	20.54	-5.49	86980	30.1	30.5	178	-2
43	20.54	-5.49	87680	31	31.7	178	-2
44	20.54	-5.49	88190	32	32.6	178	-2
45	20.54	-5.49	88690	33	33.8	178	-2
46	20.54	-5.49	89390	34	35	178	-2
47	20.54	-5.49	89830	35	36	178	-2
48	20.54	-5.49	90340	36	37	178	-2
49	20.54	-5.49	90830	37	38	178	-2
50	20.54	-5.49	91290	38	39	178	-2

SPECIMEN 7-58

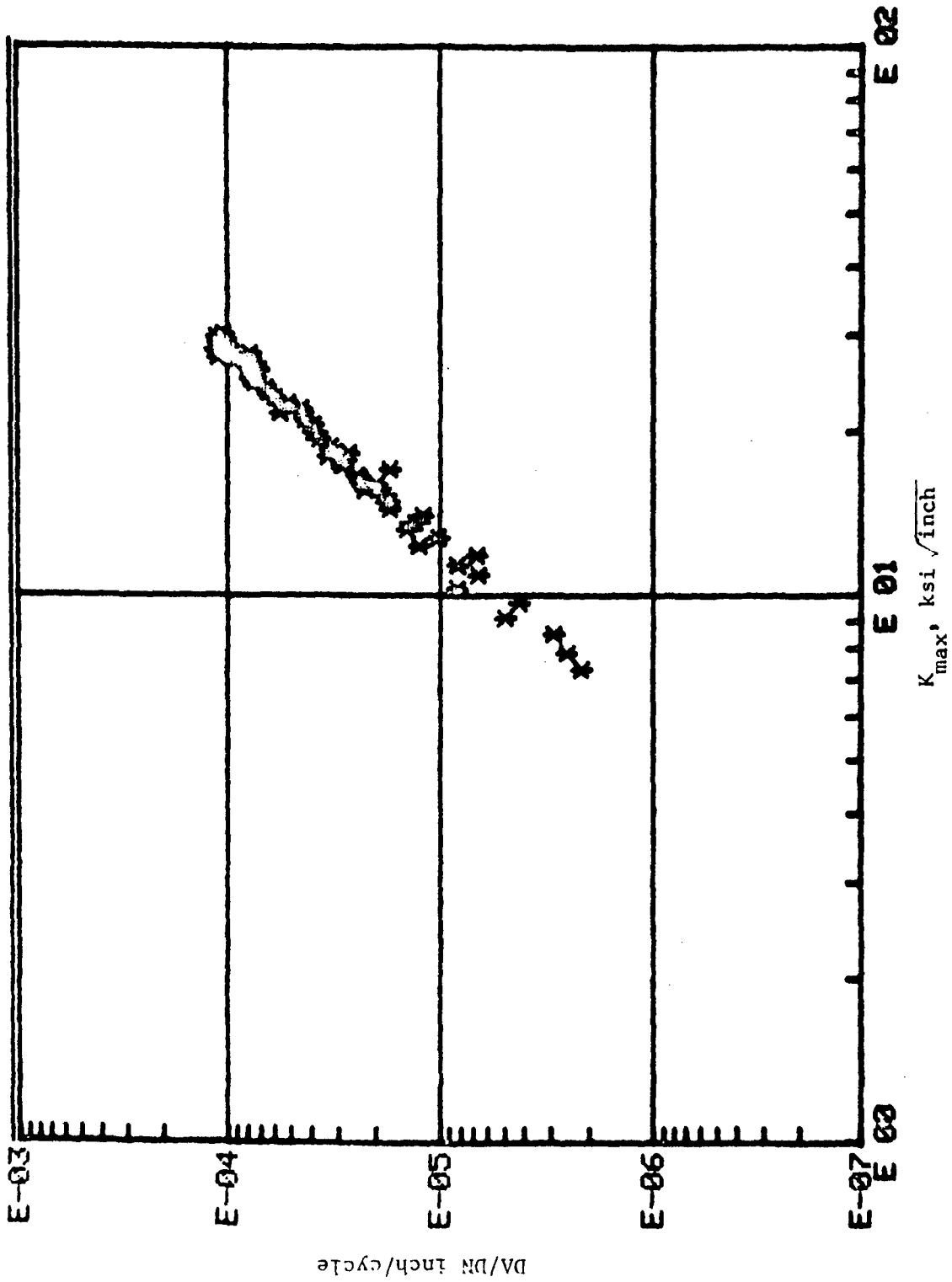
TEST CASE 29

PAGE 3

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	20.54	-5.49	91740	39	40	178	-2
52	20.54	-5.49	92220	40	41	178	-2

# SPECIMEN 7-58 TEST CASE 29

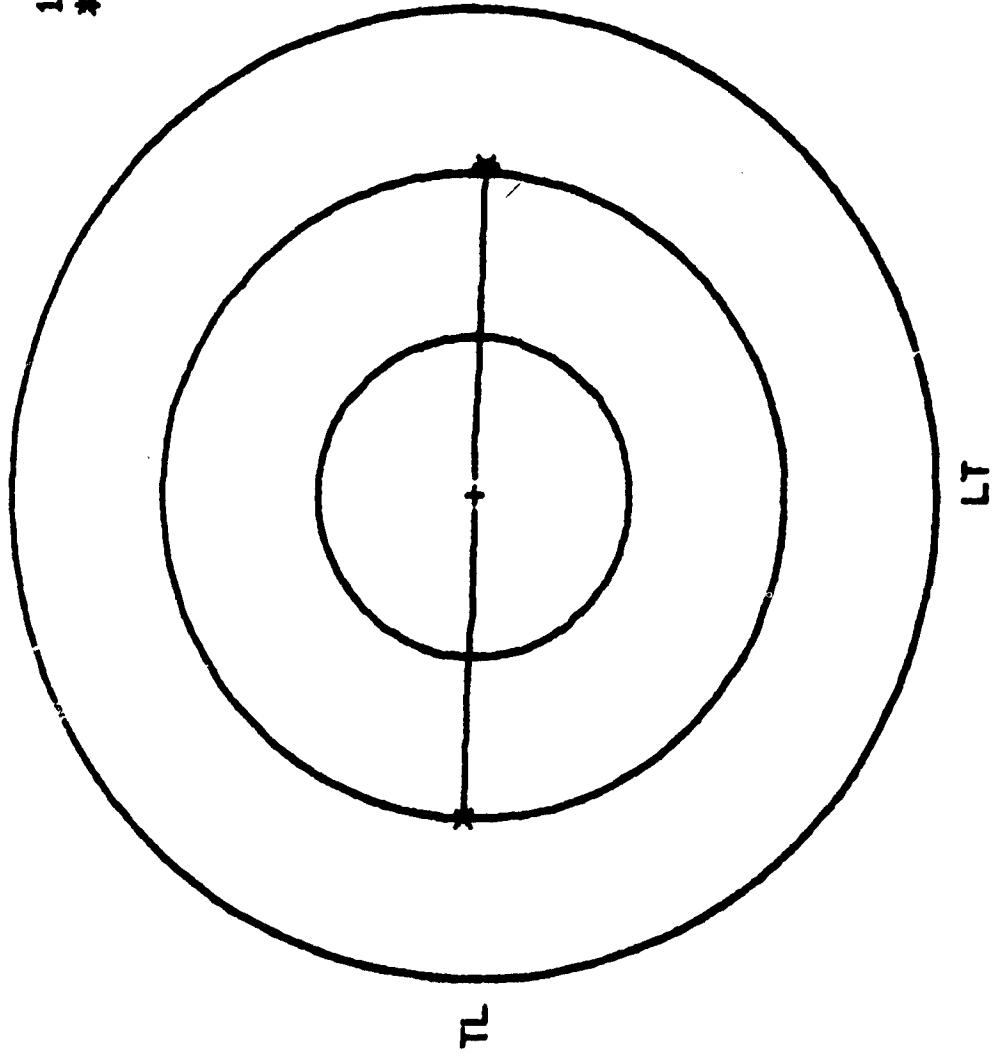
E-03 E-04 E-05 E-06 E-07



SPECIMEN 7-58

TEST CASE 29

1 IN SPACING  
\* TEST STOPPED





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CRACK GROWTH TEST OF 7075-T7 TEST CASE 30 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-50 FLAW TYPE - 1

TEMP = 73 F REL HUM = 50 % 05/05/77

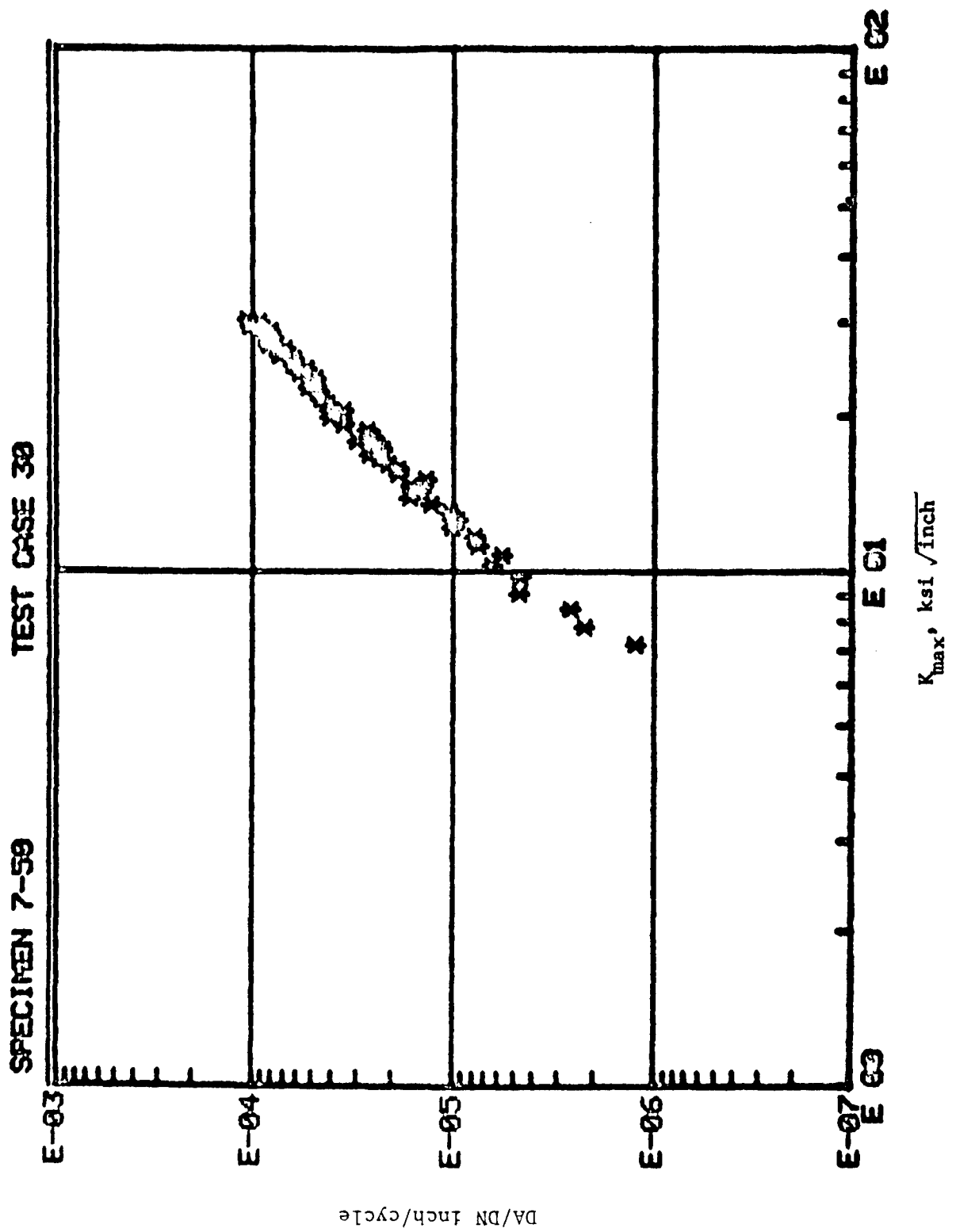
B = .177 IN R(L) = .1 R(T) = 1

FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = -.5  
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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	20.54	-5.49	0	2.1	2.2	180	0
2	20.54	-5.49	12090	2.5	2.4	180	0
3	20.54	-5.49	23260	3	2.9	180	0
4	20.54	-5.49	31890	3.5	3.3	180	0
5	20.54	-5.49	37710	4	3.9	180	0
6	20.54	-5.49	43670	4.6	4.4	180	0
7	20.54	-5.49	47170	5	4.9	180	0
8	20.54	-5.49	51070	5.5	5.3	180	-1
9	20.54	-5.49	54390	6	5.8	180	-1
10	20.54	-5.49	57590	6.5	6.3	180	-2
11	20.54	-5.49	60050	7	6.8	180	-2
12	20.54	-5.49	62650	7.5	7.3	179	-2
13	20.54	-5.49	65060	8	7.8	179	-2
14	20.54	-5.49	66980	8.5	8.3	179	-2
15	20.54	-5.49	68660	9	8.9	179	-2
16	20.54	-5.49	70220	9.5	9.3	178	-2
17	20.54	-5.49	71760	10	9.8	178	-2
18	20.54	-5.49	73760	10.5	10.4	178	-3
19	20.54	-5.49	75090	11	10.9	178	-3
20	20.54	-5.49	76430	11.5	11.4	178	-3
21	20.54	-5.49	77740	12	12	179	-3
22	20.54	-5.49	78710	12.5	12.4	179	-3
23	20.54	-5.49	79760	13	13	179	-3
24	20.54	-5.49	80870	13.5	13.5	179	-3
25	20.54	-5.49	81920	14	14	179	-3
26	20.54	-5.49	82830	14.5	14.6	179	-3
27	20.54	-5.49	83820	15	15.1	179	-3
28	20.54	-5.49	85700	16	16.1	179	-3
29	20.54	-5.49	87120	17	17.1	179	-3
30	20.54	-5.49	88340	18	18.1	179	-3
31	20.54	-5.49	89840	19	19.2	179	-3
32	20.54	-5.49	90970	20	20.1	180	-3
33	20.54	-5.49	92020	21	21	180	-3
34	20.54	-5.49	93200	22	22.2	180	-3
35	20.54	-5.49	94150	23	23.2	180	-3
36	20.54	-5.49	95100	24	24.1	180	-3
37	20.54	-5.49	96080	25	25	180	-3
38	20.54	-5.49	96940	26	26	180	-3
39	20.54	-5.49	97820	27	26.9	180	-3
40	20.54	-5.49	98700	28	28.1	180	-3
41	20.54	-5.49	99550	29	29.2	180	-3
42	20.54	-5.49	100170	30	30	180	-3
43	20.54	-5.49	100940	31	31.2	180	-3
44	20.54	-5.49	101670	32	32.2	180	-3
45	20.54	-5.49	102240	33	33.1	180	-3
46	20.54	-5.49	102900	34	34.3	180	-3
47	20.54	-5.49	103530	35	35.3	180	-3
48	20.54	-5.49	104060	36	36.1	180	-3
49	20.54	-5.49	104640	37	37	180	-3
50	20.54	-5.49	105180	38	38	180	-2

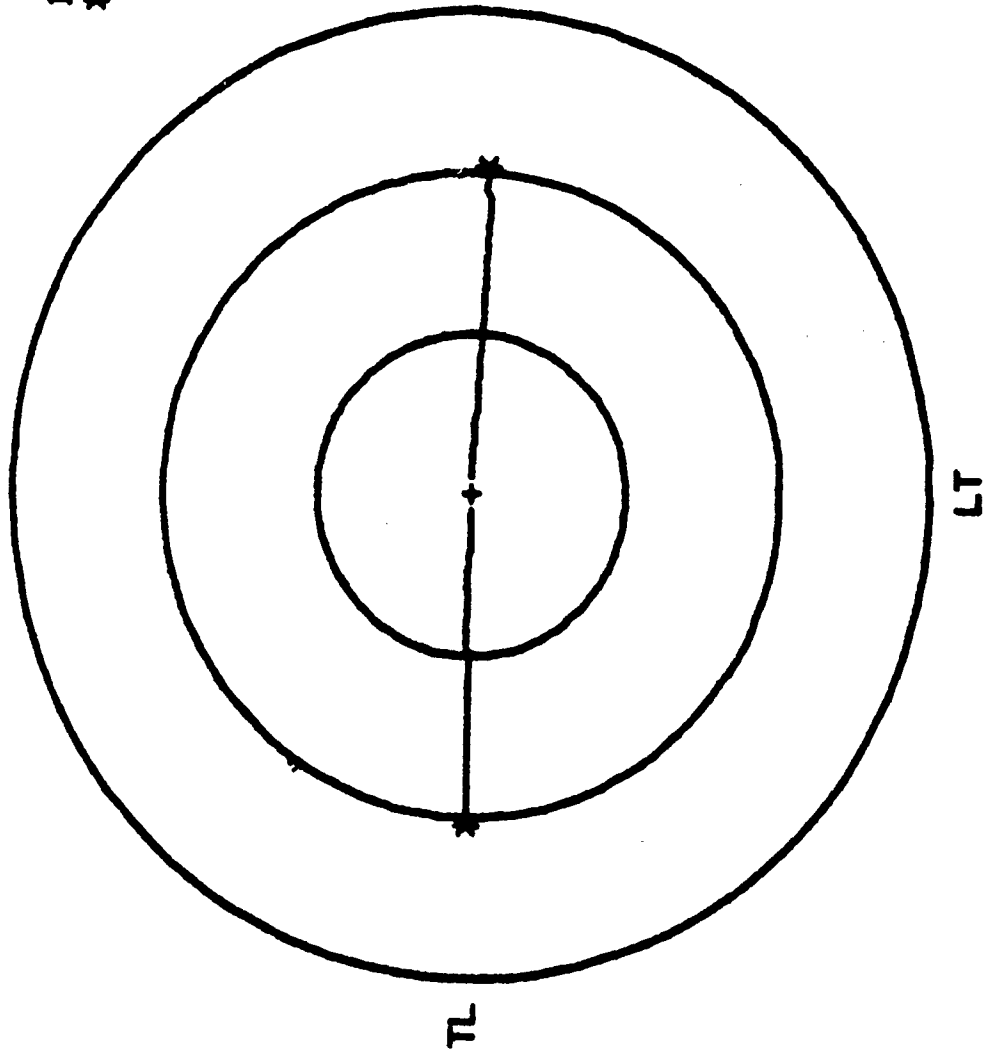
REF #	P(L) KIPS	P(I) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	20.54	-5.49	105640	39	38.9	180	-2
52	20.54	-5.49	106180	40	39.9	180	-2
53	20.54	-5.49	106630	41	40.8	180	-2



SPECIMEN 7-50

TEST CASE 30

1 IN SPACING  
\* TEST STOPPED



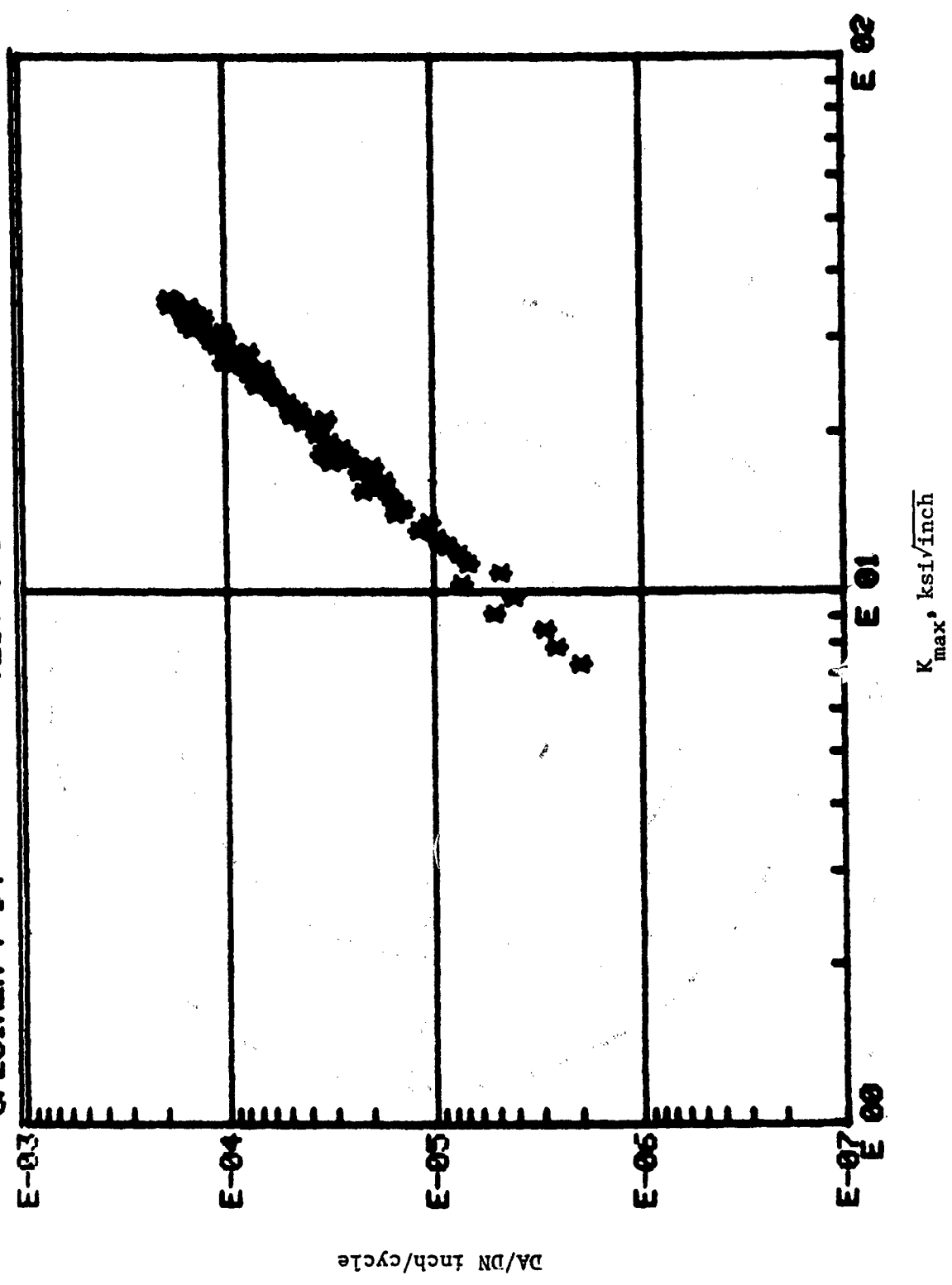
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CRACK GROWTH TEST OF 7075-T7 TEST CASE 27 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-94 FLAW TYPE - 1  
TEMP = 74 F REL HUM = 57 % 5-5-78  
B = .182 IN R(L) = .1 R(T) = .1  
FREQ = 7 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	26.76	18.09	0	2.2	2.3	181	1
2	26.76	18.09	7630	2.5	2.6	181	1
3	26.76	18.09	16350	3	3	181	1
4	26.76	18.09	24080	3.5	3.4	181	1
5	26.76	18.09	29000	4	3.9	182	1
6	26.76	18.09	35690	4.5	4.5	182	1
7	26.76	18.09	39090	5	5	182	1
8	26.76	18.09	43840	5.5	5.4	182	1
9	26.76	18.09	47500	6	5.9	182	1
10	26.76	18.09	50850	6.5	6.4	182	1
11	26.76	18.09	53480	7	6.8	182	1
12	26.76	18.09	56080	7.5	7.3	182	1
13	26.76	18.09	58230	8	7.8	182	1
14	26.76	18.09	61110	8.6	8.4	182	2
15	26.76	18.09	62600	9	8.9	182	2
16	26.76	18.09	64210	9.5	9.3	181	2
17	26.76	18.09	65990	10	9.9	181	2
18	26.76	18.09	67390	10.5	10.3	181	2
19	26.76	18.09	68550	11	10.8	181	2
20	26.76	18.09	69980	11.5	11.3	181	2
21	26.76	18.09	71440	12	11.8	181	2
22	26.76	18.09	72920	12.5	12.4	181	2
23	26.76	18.09	73930	13	12.9	181	2
24	26.76	18.09	75210	13.5	13.4	181	2
25	26.76	18.09	76020	14	13.9	181	2
26	26.76	18.09	76920	14.5	14.3	181	2
27	26.76	18.09	77730	15	14.9	181	2
28	26.76	18.09	79460	16	15.8	181	2
29	26.76	18.09	81060	17	16.8	181	2
30	26.76	18.09	82540	18	17.9	181	2
31	26.76	18.09	83970	19	18.9	181	2
32	26.76	18.09	85110	20	19.8	182	3
33	26.76	18.09	85340	20.1	20	182	3
34	26.76	18.09	86240	21	20.8	182	3
35	26.76	18.09	87330	22	21.7	182	3
36	26.76	18.09	89340	24	23.7	182	3
37	26.76	18.09	90110	25	24.4	182	3
38	26.76	18.09	91130	26	25.8	182	3
39	26.76	18.09	91810	27	26.7	182	3
40	26.76	18.09	92650	28	27.8	182	3
41	26.76	18.09	93370	29	28.8	182	3
42	26.76	18.09	94020	30	29.8	182	3
43	26.76	18.09	94750	31	30.7	182	3
44	26.76	18.09	95290	32	31.5	182	3
45	26.76	18.09	95810	33	32.6	182	3
46	26.76	18.09	96430	34	33.8	182	3
47	26.76	18.09	96990	35	34.9	182	3
48	26.76	18.09	97480	36	35.4	182	3
49	26.76	18.09	97990	37	36.4	182	3
50	26.76	18.09	98450	38	37.4	182	3

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	26.76	18.09	99030	39	38.8	182	3
52	26.76	18.09	99440	40	39.7	182	3
53	26.76	18.09	99840	41	40.3	182	3
54	26.76	18.09	100290	42	41.3	182	3
55	26.76	18.09	100710	43	42	182	3
56	26.76	18.09	101060	44	43	182	3
57	26.76	18.09	101420	45	44	182	4
58	26.76	18.09	101750	46	45	182	3
59	26.76	18.09	102080	47	45.9	182	3
60	26.76	18.09	102480	48	46.9	182	3
61	26.76	18.09	102850	49	47.9	181	3
62	26.76	18.09	103170	50	48.9	181	4
63	26.76	18.09	103510	51	50	182	4
64	26.76	18.09	103850	52	51	182	4
65	26.76	18.09	104190	53	52	182	4
66	26.76	18.09	104460	54	53	182	4
67	26.76	18.09	104750	55	54	182	4
68	26.76	18.09	105030	56	55	182	4
69	26.76	18.09	105300	57	56	182	4



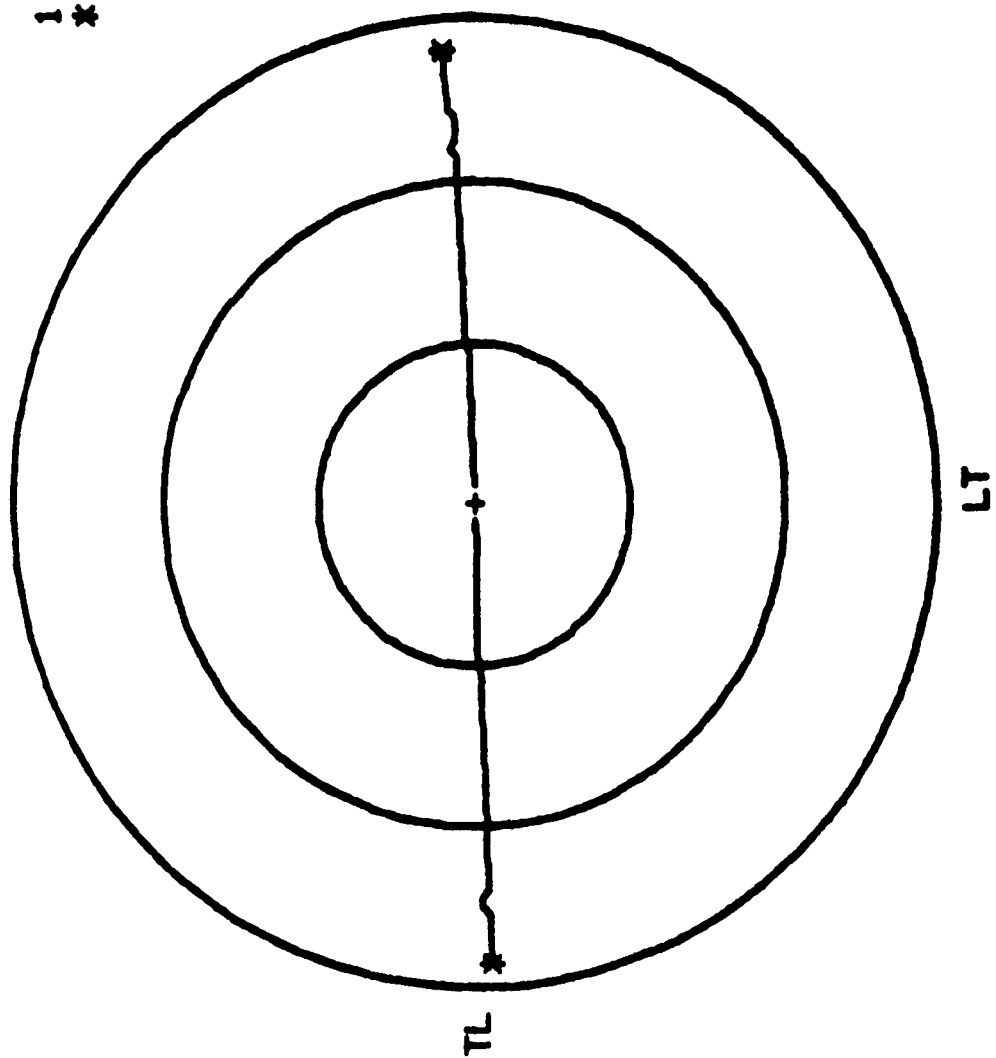
SPECIMEN 7-94 TEST CASE 27



SPECIMEN 7-94

TEST CASE 27

1 IN SPACING  
\* TEST STOPPED



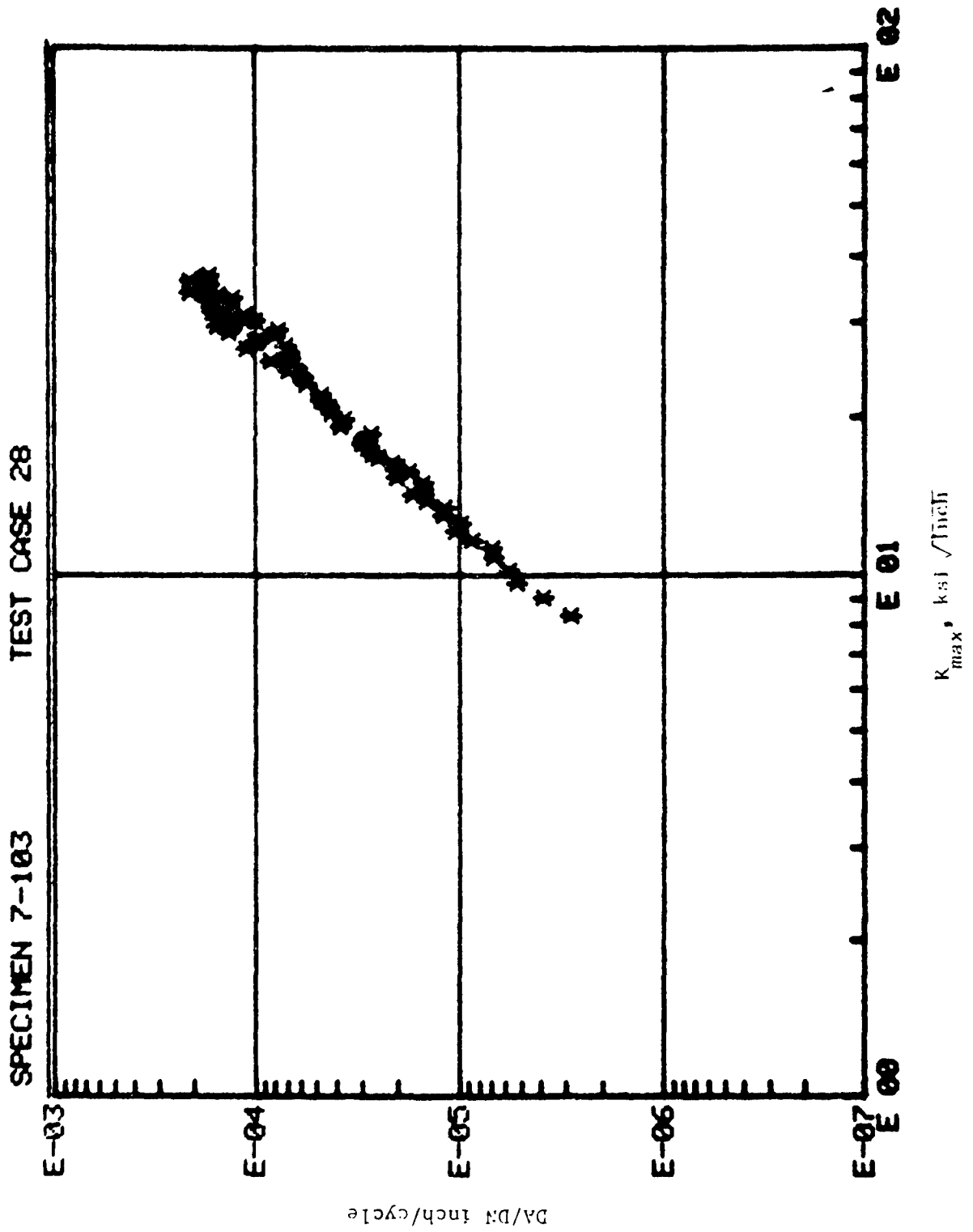
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CRACK GROWTH TEST OF 7075-T7 TEST CASE 23 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-103 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 90 % 09/02/77  
B = .174 IN R(L) = .1 R(T) = .1  
FREQ = 8 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5

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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	26.76	18.09	0	2.9	2.7	180	0
2	26.76	18.09	10600	3.5	3.3	180	0
3	26.76	18.09	17030	4	3.8	180	0
4	26.76	18.09	21760	4.5	4.3	180	0
5	26.76	18.09	26110	5	4.8	180	0
6	26.76	18.09	31260	5.7	5.5	180	0
7	26.76	18.09	33420	6	5.8	180	0
8	26.76	18.09	36290	6.5	6.3	180	0
9	26.76	18.09	38680	7	6.8	180	0
10	26.76	18.09	41230	7.5	7.3	180	1
11	26.76	18.09	43310	8	7.8	180	1
12	26.76	18.09	45430	8.5	8.3	180	1
13	26.76	18.09	47150	9	8.8	180	1
14	26.76	18.09	48620	9.5	9.3	180	1
15	26.76	18.09	50280	10	9.8	180	1
16	26.76	18.09	51930	10.5	10.3	180	0
17	26.76	18.09	53270	11	10.9	180	0
18	26.76	18.09	54550	11.5	11.3	180	0
19	26.76	18.09	55920	12	11.9	180	0
20	26.76	18.09	56980	12.5	12.3	180	0
21	26.76	18.09	57980	13	12.8	180	0
22	26.76	18.09	59000	13.5	13.4	180	0
23	26.76	18.09	59980	14	13.9	180	0
24	26.76	18.09	60730	14.5	14.4	180	1
25	26.76	18.09	61590	15	14.9	181	1
26	26.76	18.09	63440	16	15.9	181	1
27	26.76	18.09	64740	17	16.9	182	1
28	26.76	18.09	66100	18	17.9	182	1
29	26.76	18.09	67290	19	18.9	181	1
30	26.76	18.09	68440	20	19.9	182	2
31	26.76	18.09	69550	21	21	182	2
32	26.76	18.09	70610	22	22	182	2
33	26.76	18.09	73380	25	25.2	182	2
34	26.76	18.09	74170	26	26.1	182	2
35	26.76	18.09	74930	27	27.2	182	2
36	26.76	18.09	75700	28	28.2	182	3
37	26.76	18.09	76500	29.1	29.8	182	3
38	26.76	18.09	77090	30	30.5	182	2
39	26.76	18.09	77940	31	31.8	182	2
40	26.76	18.09	78370	32	32.7	183	2
41	26.76	18.09	78900	33	33.2	183	2
42	26.76	18.09	79430	34	34.3	183	2
43	26.76	18.09	79950	35	35.3	183	2
44	26.76	18.09	80570	36	36.3	183	2
45	26.76	18.09	80940	37	37.3	183	2
46	26.76	18.09	81520	38	38.1	182	2
47	26.76	18.09	81830	39	39	182	2
48	26.76	18.09	82230	40	40	182	2
49	26.76	18.09	82680	41	40.8	182	2
50	26.76	18.09	83070	42	41.8	182	1

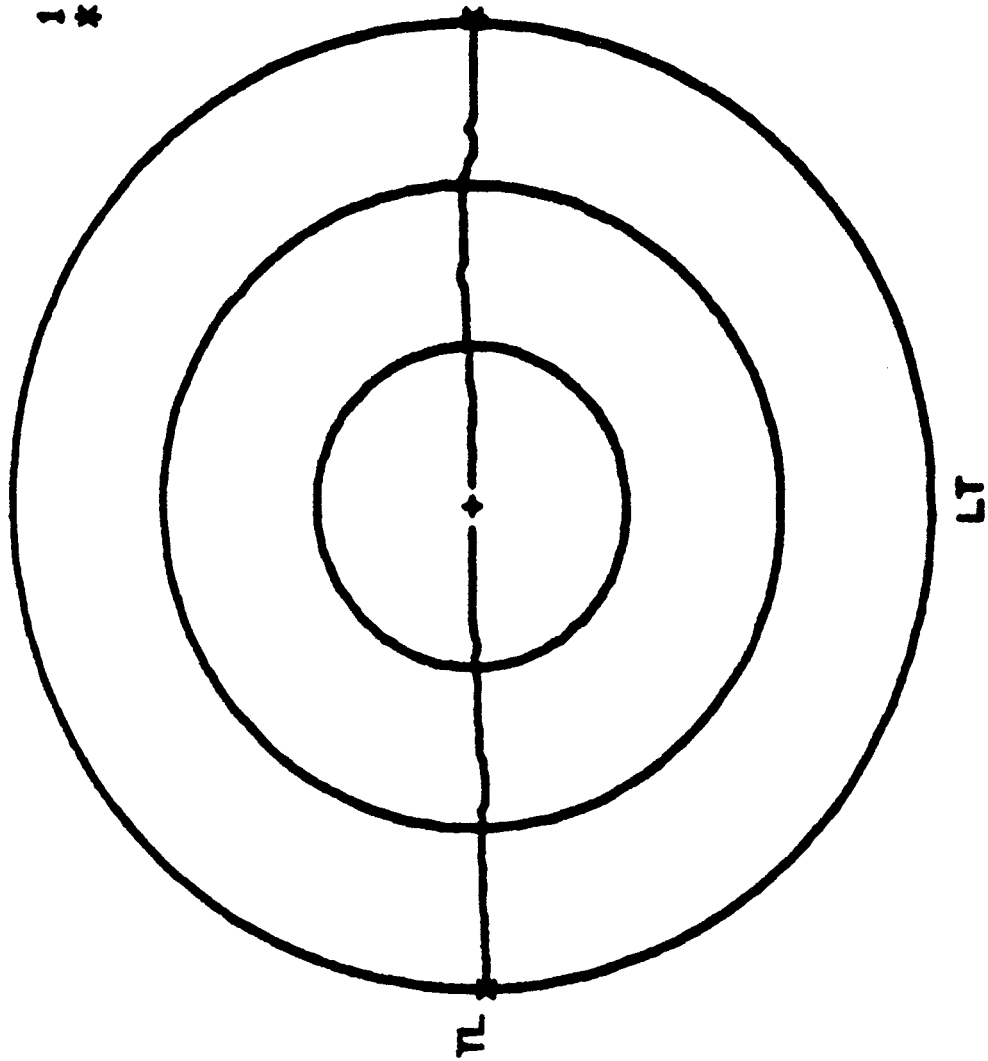
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	26.76	18.09	83490	43	42.7	182	1
52	26.76	18.09	83800	44	43.7	182	0
53	26.76	18.09	84190	45	44.9	182	0
54	26.76	18.09	84540	46	45.9	182	0
55	26.76	18.09	84920	47	47	182	1
56	26.76	18.09	85230	48	48.1	182	0
57	26.76	18.09	85530	49	48.9	182	0
58	26.76	18.09	85900	50	49.8	182	0
59	26.76	18.09	86250	51	50.9	182	0
60	26.76	18.09	86580	52	52	182	0
61	26.76	18.09	86880	53	53.1	182	0
62	26.76	18.09	87070	54	54.1	182	0
63	26.76	18.09	87340	55	55	182	0
64	26.76	18.09	87640	56	56	182	0
65	26.76	18.09	87960	57	57.2	182	0
66	26.76	18.09	88280	58	58.2	182	0
67	26.76	18.09	88560	59	59.7	182	0
68	26.76	18.09	88830	60	60.5	182	0



SPECIMEN 7-103

TEST CASE 28

1 IN SPACING  
\* TEST STOPPED



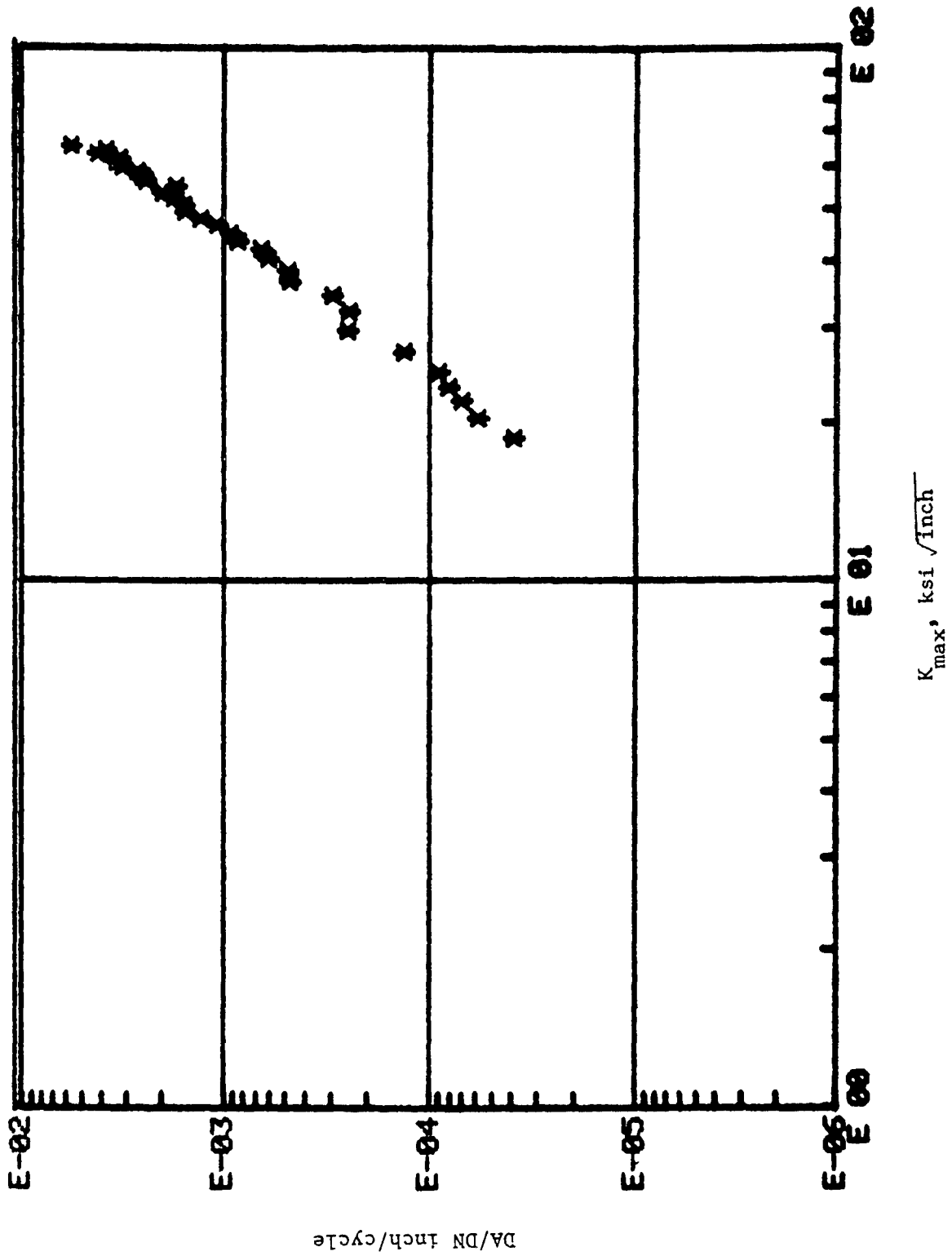
-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 139 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-35 FLAW TYPE - 1  
TEMP = 77 F REL HUM = 53 % 01-17-78  
B = .172 IN R(L) = .1 R(T) = .1  
FREQ = 2 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----



REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	66.9	45.22	0	2.6	2	180	0
2	66.9	45.22	510	3	2.4	181	-2
3	66.9	45.22	939	3.5	2.9	181	-4
4	66.9	45.22	1261	4	3.3	182	-5
5	66.9	45.22	1540	4.5	3.7	183	-6
6	66.9	45.22	1843	5	4.3	184	-7
7	66.9	45.22	2278	6	5.6	185	-10
8	66.9	45.22	2478	7	6.6	184	-10
9	66.9	45.22	2701	8	7.8	184	-10
10	66.9	45.22	2879	9	8.9	184	-9
11	66.9	45.22	2984	10	9.9	184	-8
12	66.9	45.22	3087	11	10.9	183	-7
13	66.9	45.22	3174	12	12	183	-7
14	66.9	45.22	3247	13	12.9	183	-7
15	66.9	45.22	3300	14	13.7	183	-6
16	66.9	45.22	3354	15	14.7	183	-6
17	66.9	45.22	3401	16	15.7	183	-6
18	66.9	45.22	3440	17	16.7	182	-6
19	66.9	45.22	3471	18	17.6	182	-6
20	66.9	45.22	3505	19	18.7	182	-6
21	66.9	45.22	3535	20	19.8	182	-5
22	66.9	45.22	3559	21	20.7	182	-5
23	66.9	45.22	3590	22	21.8	182	-5
24	66.9	45.22	3611	23	22.8	181	-5
25	66.9	45.22	3630	24	23.7	181	-4
26	66.9	45.22	3648	25	24.6	181	-4
27	66.9	45.22	3664	26	25.6	181	-4
28	66.9	45.22	3679	27	26.6	181	-4
29	66.9	45.22	3696	28	27.8	181	-4
30	66.9	45.22	3708	29	28.8	181	-4
31	66.9	45.22	3722	30.1	29.8	181	-4
32	66.9	45.22	3730	31	30.7	181	-4

SPECIMEN 7-35

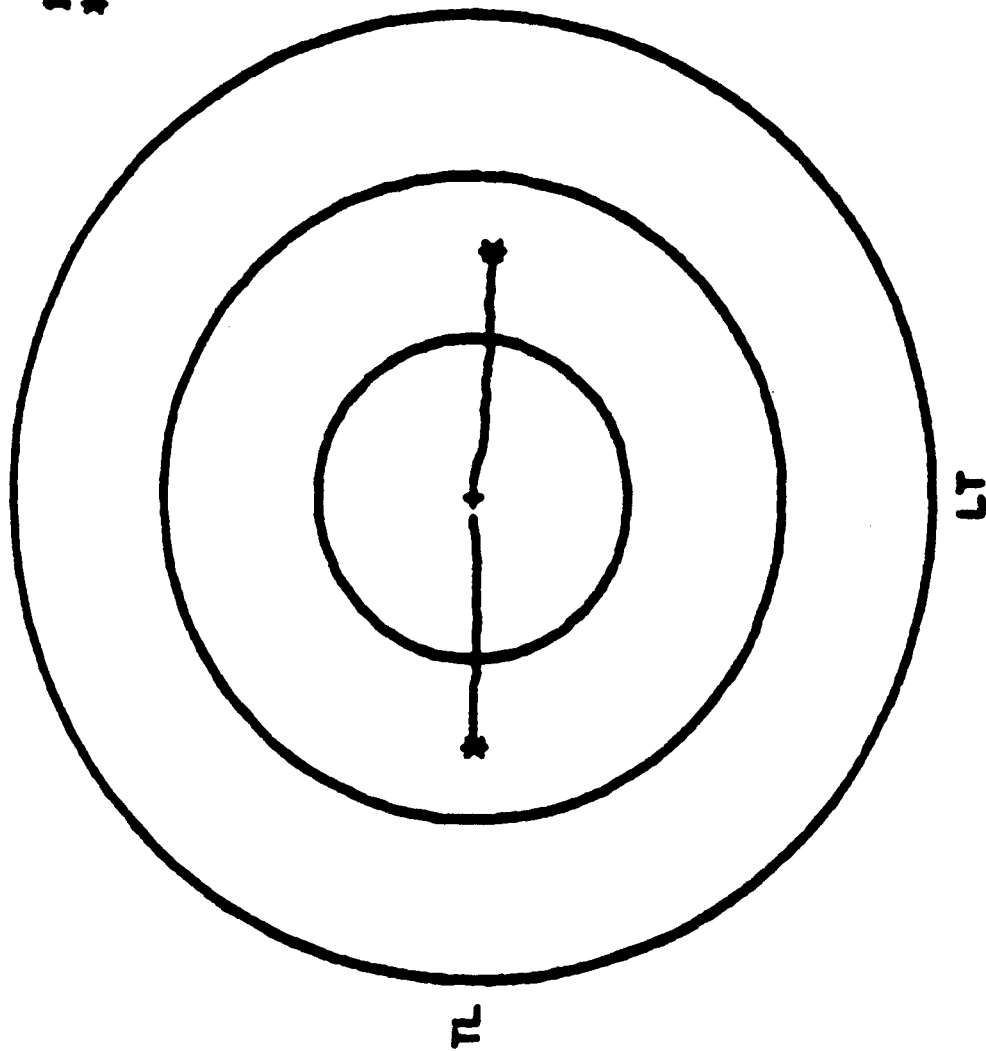
TEST CASE 139



SPECIMEN 7-35

TEST CASE 139

1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 63 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-16 FLAW TYPE - 1

TEMP = 76 F

REL HUM = 66 %

6-12-78

B = .182 IN

R(L) = .1

R(T) = .1

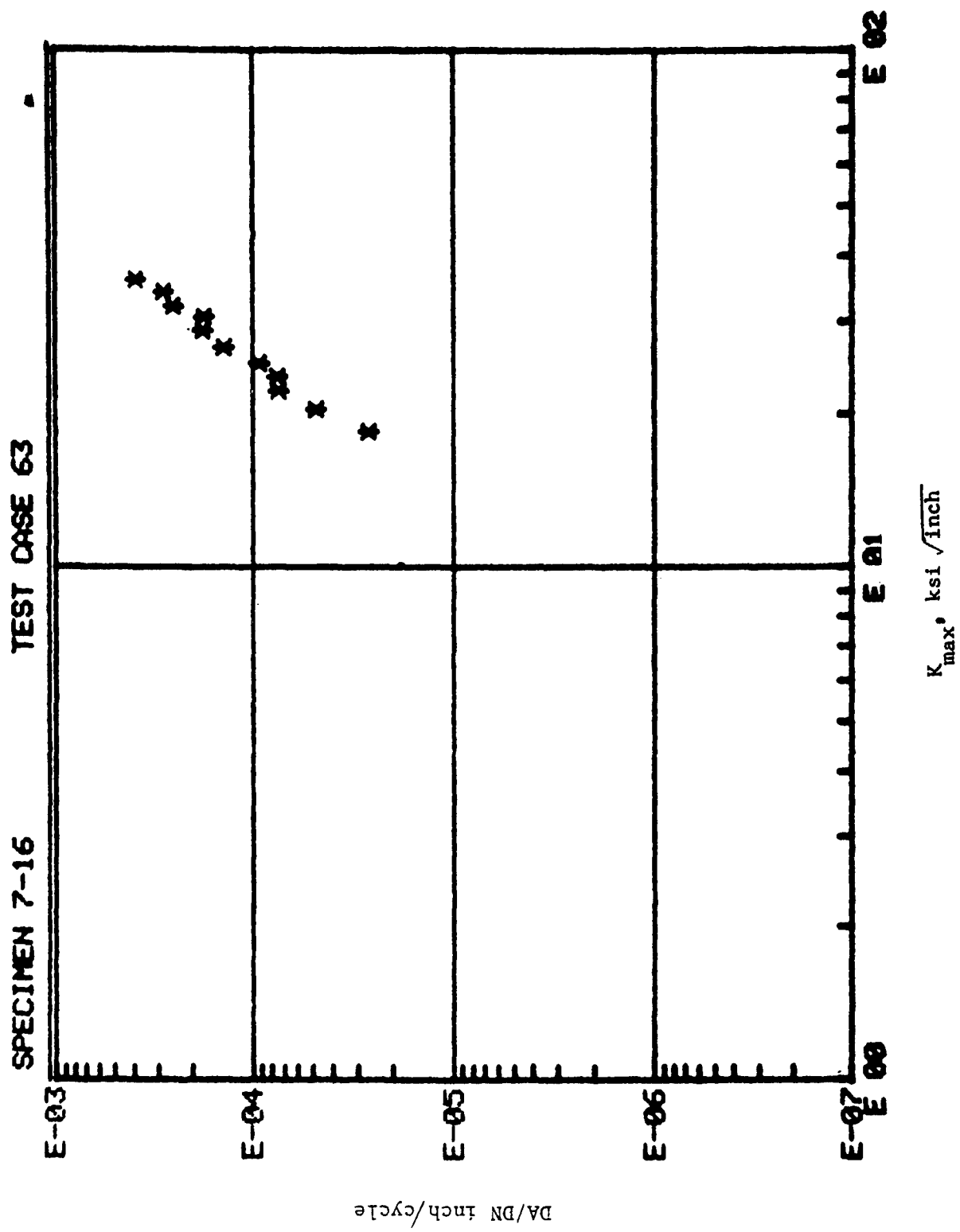
FREQ = 2 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

BIAXIAL RATIO = .5  
-----

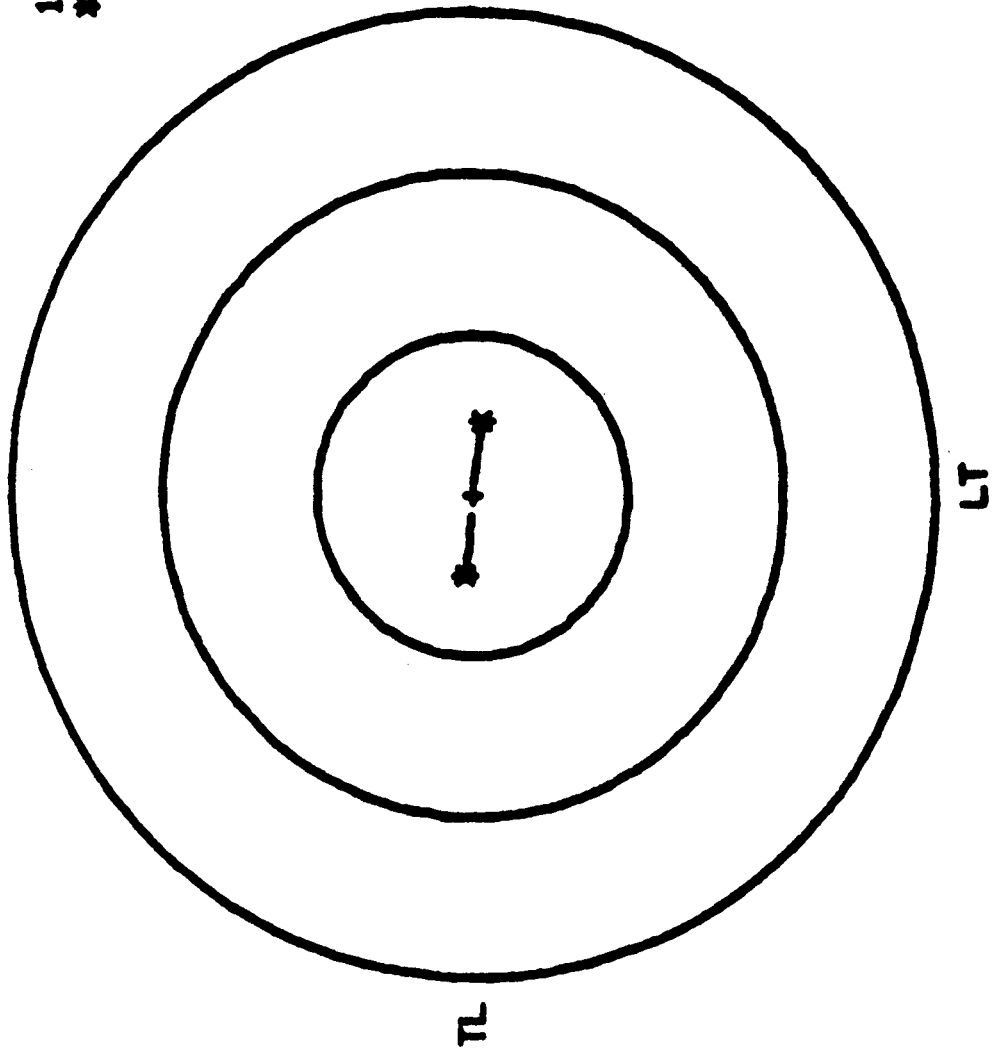
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	66.9	45.2	0	2.5	1.8	178	-4
2	66.9	45.2	1040	3	2.4	177	-5
3	66.9	45.2	1560	3.6	2.8	177	-6
4	66.9	45.2	1930	4.2	3.3	176	-6
5	66.9	45.2	2230	4.7	3.7	176	-6
6	66.9	45.2	2500	5.2	4.2	176	-7
7	66.9	45.2	2770	5.9	5	176	-8
8	66.9	45.2	3040	6.7	6.1	176	-8
9	66.9	45.2	3170	7.1	6.6	175	-8
10	66.9	45.2	3350	8	7.5	175	-8
11	66.9	45.2	3520	9	8.4	175	-7
12	66.9	45.2	3650	10	9.4	175	-7



SPECIMEN 7-16

TEST CASE 63

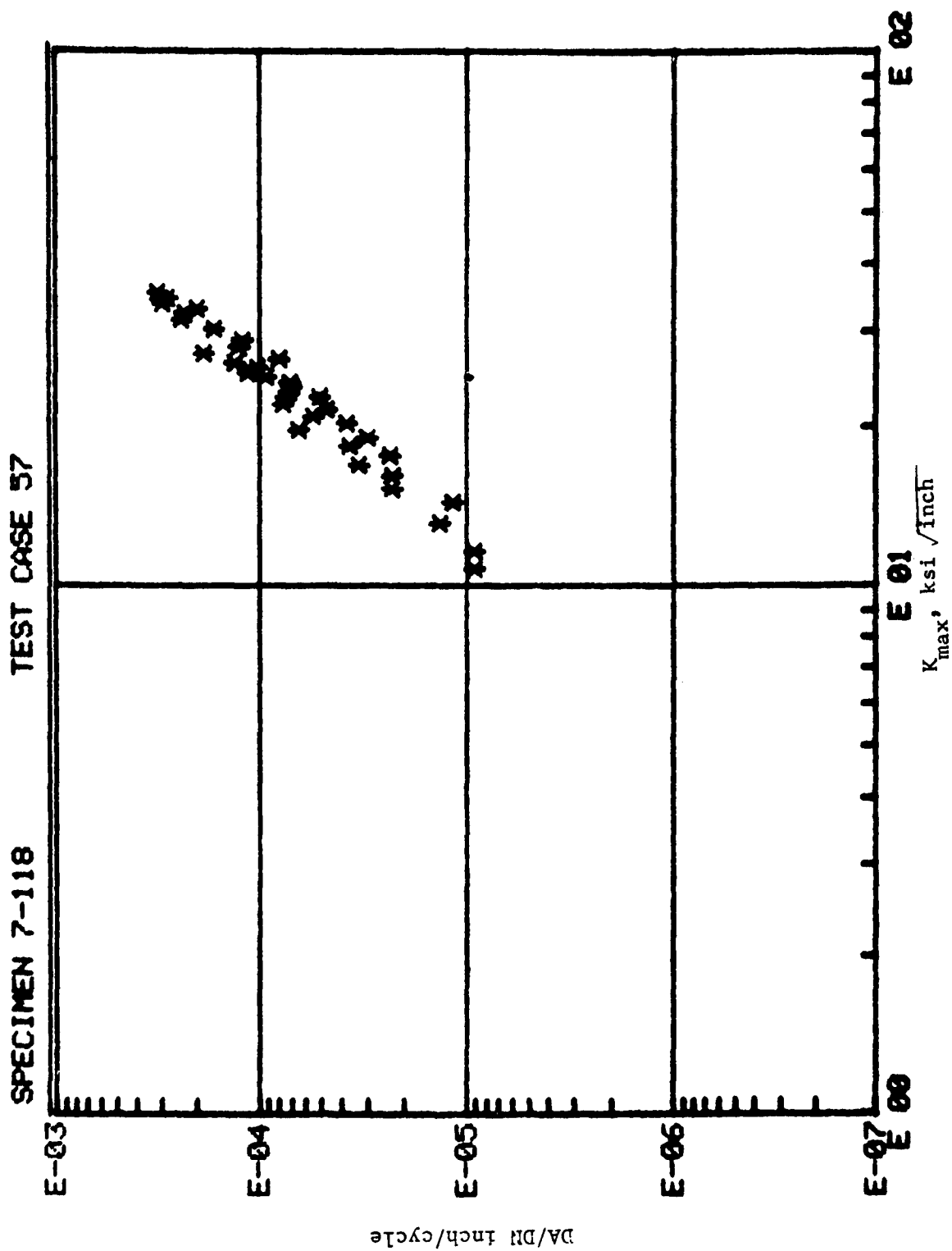
1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 57 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-118 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 60 % 08/24/77  
B = .174 IN R(L) = .1 R(T) = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----



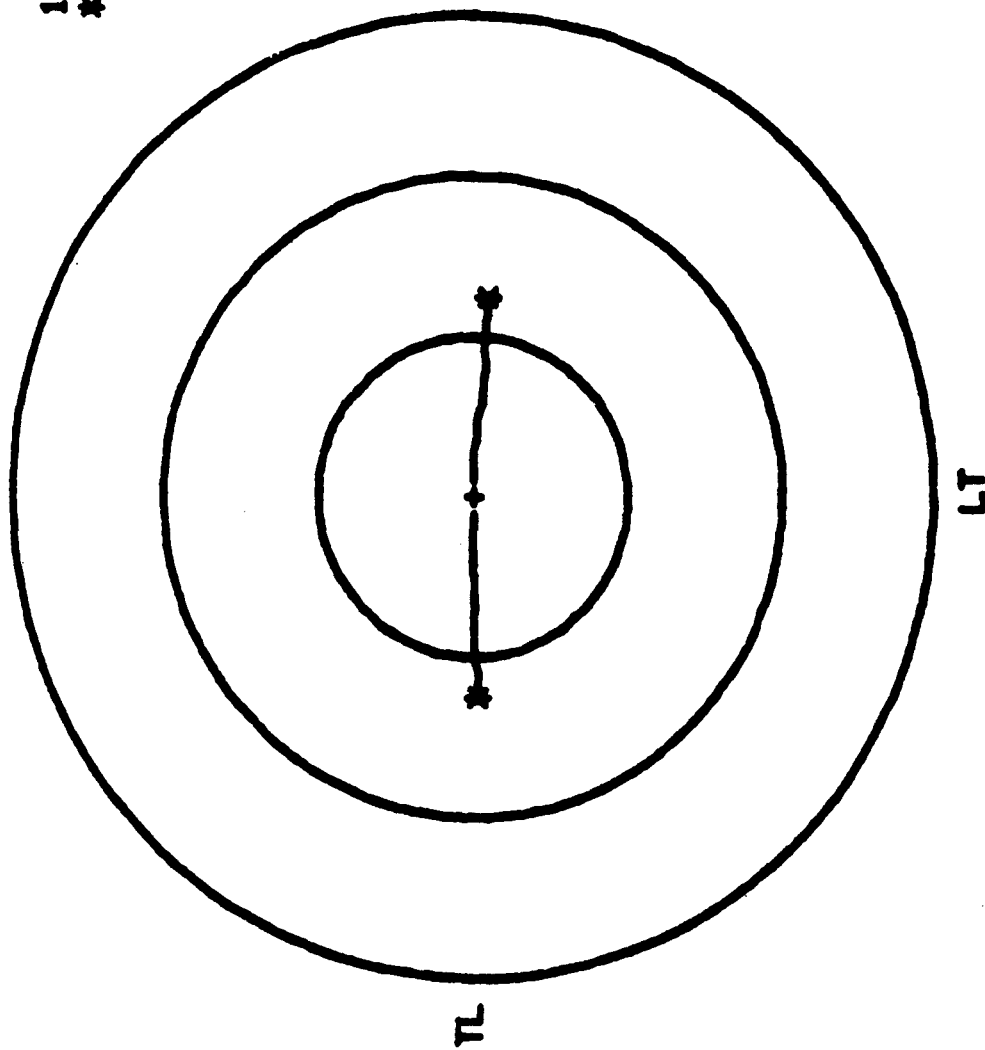
REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	40.14	27.13	0	2.2	2.1	180	0
2	40.14	27.13	1630	2.5	2.4	180	0
3	40.14	27.13	4370	3	2.9	180	0
4	40.14	27.13	8080	4	3.9	180	0
5	40.14	27.13	9800	4.5	4.2	180	0
6	40.14	27.13	11110	5	4.9	180	0
7	40.14	27.13	12090	5.5	5.3	180	-1
8	40.14	27.13	12920	6	5.9	180	-1
9	40.14	27.13	13880	6.5	6.3	180	-2
10	40.14	27.13	14700	7	7	180	-2
11	40.14	27.13	15280	7.5	7.2	180	-3
12	40.14	27.13	15750	8	7.9	180	-3
13	40.14	27.13	16350	8.5	8.3	180	-3
14	40.14	27.13	16850	9	8.9	180	-3
15	40.14	27.13	17220	9.5	9.1	180	-3
16	40.14	27.13	17610	10	9.8	181	-3
17	40.14	27.13	18100	10.6	10.2	181	-4
18	40.14	27.13	18380	11	10.6	181	-4
19	40.14	27.13	18740	11.6	11	181	-4
20	40.14	27.13	19060	12	11.5	181	-5
21	40.14	27.13	19330	12.5	12	181	-5
22	40.14	27.13	19550	13	12.5	181	-5
23	40.14	27.13	19820	13.6	13	181	-5
24	40.14	27.13	20010	14	13.6	182	-5
25	40.14	27.13	20320	14.5	14.1	181	-5
26	40.14	27.13	20510	15	15	181	-5
27	40.14	27.13	20990	16	15.9	181	-5
28	40.14	27.13	21330	17	17	181	-5
29	40.14	27.13	21940	19	19	181	-4
30	40.14	27.13	22150	20	20	181	-4
31	40.14	27.13	22370	21	21	181	-4
32	40.14	27.13	22620	22	22	182	-4
33	40.14	27.13	22790	23	23	182	-4
34	40.14	27.13	22970	24	24	182	-4
35	40.14	27.13	23130	25	25	182	-4



SPECIMEN 7-118

TEST CASE 57

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 133 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-99 FLAW TYPE - 1

TEMP = 80 F REL HUM = 49 % 6-7-77

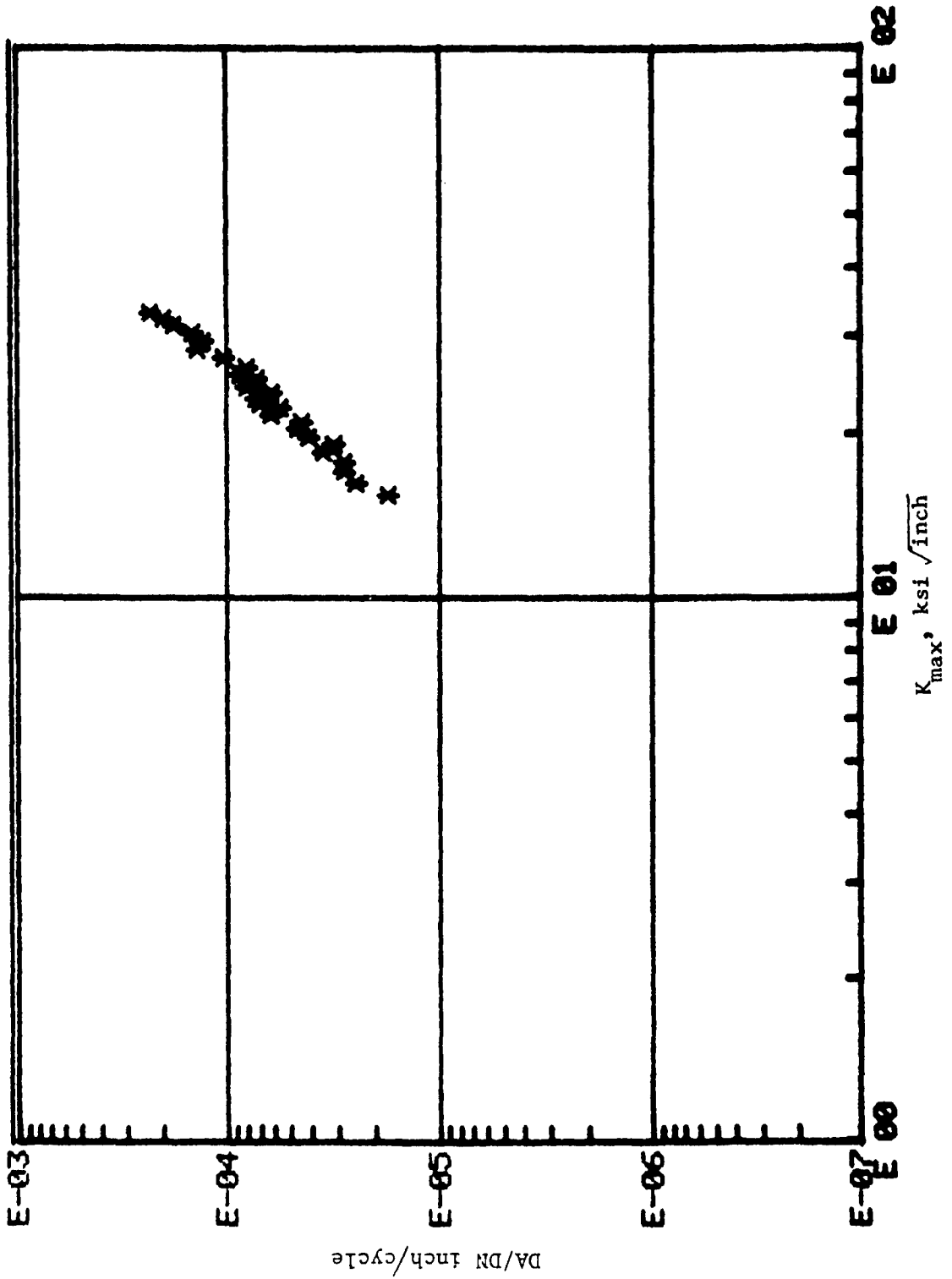
B = .18 IN R(L) = .1 R(T) = .1

FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	44.8	44.8	0	4	5	184	-4
2	44.8	44.8	1430	4.5	5.5	184	-4
3	44.8	44.8	2440	5	6	184	-4
4	44.8	44.8	3330	5.5	6.5	183	-5
5	44.8	44.8	4230	6	7	183	-5
6	44.8	44.8	5010	6.6	7.5	183	-5
7	44.8	44.8	5650	7	7.9	184	-5
8	44.8	44.8	6260	7.5	8.4	183	-6
9	44.8	44.8	6800	8	8.9	183	-6
10	44.8	44.8	7370	8.5	9.4	183	-6
11	44.8	44.8	7860	9.1	10	183	-6
12	44.8	44.8	8220	9.5	10.4	183	-7
13	44.8	44.8	8510	10	10.7	183	-7
14	44.8	44.8	8860	10.5	11.2	183	-7
15	44.8	44.8	9270	11	11.7	183	-7
16	44.8	44.8	9610	11.6	12.2	182	-6
17	44.8	44.8	9840	12	12.5	182	-6
18	44.8	44.8	10190	12.5	13	182	-6
19	44.8	44.8	10450	13	13.4	182	-6
20	44.8	44.8	11070	14	14.4	182	-5
21	44.8	44.8	11630	15.2	15.5	183	-4
22	44.8	44.8	12070	16.5	16.6	183	-3
23	44.8	44.8	12460	17.6	17.5	183	-2
24	44.8	44.8	12890	19	18.6	183	-2
25	44.8	44.8	13200	20	19.8	183	-1
26	44.8	44.8	13440	21	20.7	183	0
27	44.8	44.8	13660	22	21.7	183	0

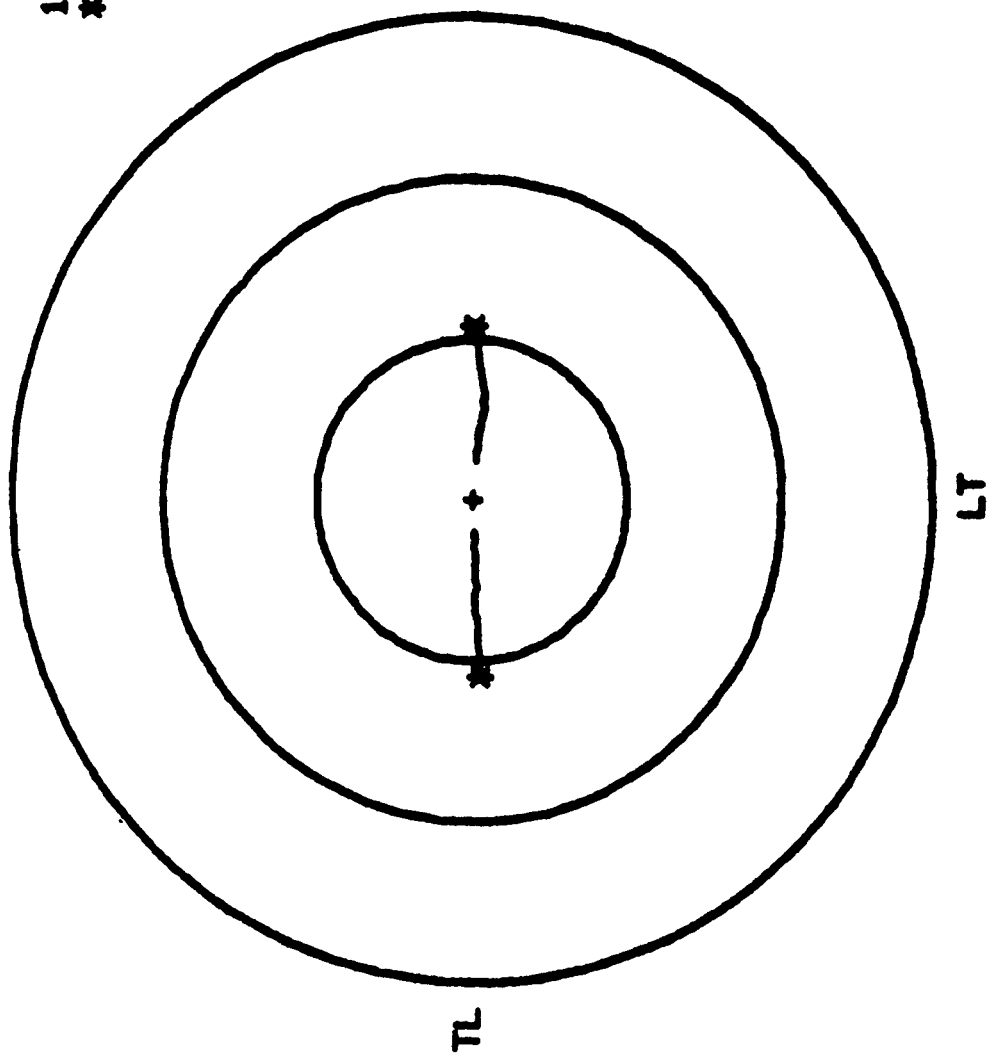
# SPECIMEN 7-99 TEST CASE 133



SPECIMEN 7-99

TEST CASE 133

1 IN SPACING  
\* TEST STOPPED



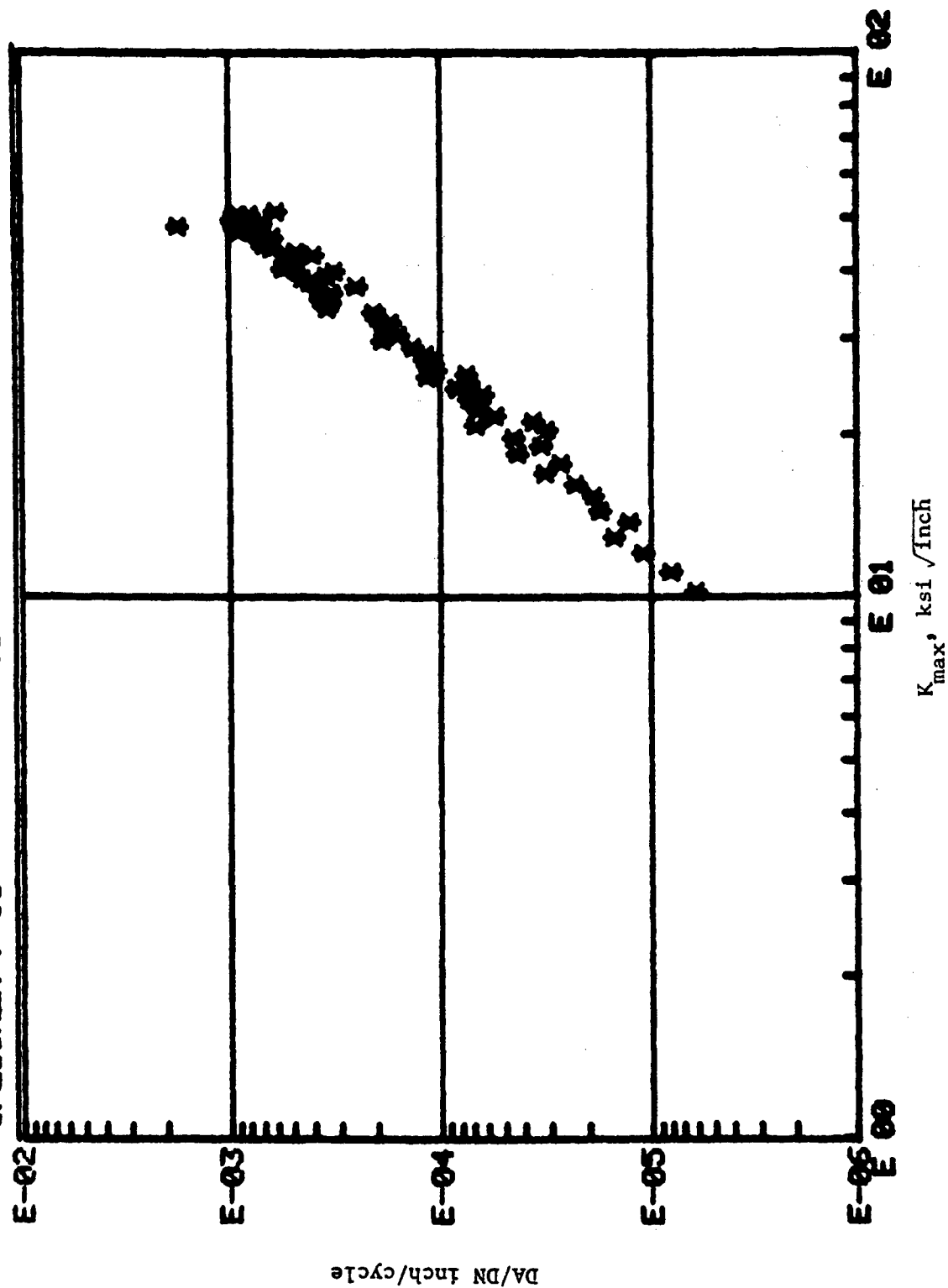
-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 55 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-11 FLAW TYPE - 1  
TEMP = 74 F REL HUM = 56 % 05-17-78  
B = .181 IN R(L) = .1 R(T) = .1  
FREQ = 3 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = 1  
-----



REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	44.8	44.8	0	2	2	185	3
2	44.8	44.8	1220	2.2	2.1	184	3
3	44.8	44.8	4930	2.8	2.7	184	3
4	44.8	44.8	6310	3.1	3	184	3
5	44.8	44.8	8140	3.7	3.5	184	4
6	44.8	44.8	9310	4	3.8	185	4
7	44.8	44.8	10740	4.5	4.3	185	5
8	44.8	44.8	12200	5	4.9	186	5
9	44.8	44.8	13390	5.5	5.5	186	5
10	44.8	44.8	14020	6	5.8	186	5
11	44.8	44.8	14950	6.5	6.3	186	5
12	44.8	44.8	15590	7	6.9	187	5
13	44.8	44.8	16340	7.5	7.4	187	6
14	44.8	44.8	16950	8	8	187	6
15	44.8	44.8	17590	8.5	8.3	187	6
16	44.8	44.8	17810	8.8	8.6	187	6
17	44.8	44.8	18290	9.1	9	187	7
18	44.8	44.8	18610	9.5	9.3	187	7
19	44.8	44.8	18990	10	9.8	188	7
20	44.8	44.8	19320	10.5	10.2	188	7
21	44.8	44.8	19660	11	10.7	188	7
22	44.8	44.8	20060	11.5	11.2	188	7
23	44.8	44.8	20420	12	11.9	188	7
24	44.8	44.8	20760	12.5	12.4	188	7
25	44.8	44.8	21000	13	13	188	8
26	44.8	44.8	21100	13.2	13.1	188	8
27	44.8	44.8	21510	14	14	188	8
28	44.8	44.8	21730	14.5	14.5	188	7
29	44.8	44.8	21940	15	15	188	7
30	44.8	44.8	22370	16	16	188	7
31	44.8	44.8	22740	17	17	188	7
32	44.8	44.8	22980	18	17.8	188	7
33	44.8	44.8	23250	19	18.5	188	7
34	44.8	44.8	23510	20	19.4	188	7
35	44.8	44.8	23770	21	20.2	188	7
36	44.8	44.8	24010	22	21.1	188	8
37	44.8	44.8	24250	23	22.1	188	8
38	44.8	44.8	24390	24	23	188	8
39	44.8	44.8	24540	25	24	188	9
40	44.8	44.8	24670	26	24.9	188	9
41	44.8	44.8	24830	27	26	188	9
42	44.8	44.8	24950	28	26.8	188	8
43	44.8	44.8	25070	29	27	188	8
44	44.8	44.8	25190	30	28	188	8
45	44.8	44.8	25290	31	28.8	188	8
46	44.8	44.8	25420	32	29.6	188	8
47	44.8	44.8	25530	33	30	187	8
48	44.8	44.8	25620	34	31	187	8
49	44.8	44.8	25710	35	31.9	187	8
50	44.8	44.8	25810	36	32.8	187	8

REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	44.8	44.8	25910	37	33.9	187	9
52	44.8	44.8	26010	38	34.5	187	9
53	44.8	44.8	26140	39	36	187	9
54	44.8	44.8	26220	40	37	187	9
55	44.8	44.8	26290	41	37.9	187	9
56	44.8	44.8	26360	42	38.8	187	9
57	44.8	44.8	26420	43	39.5	187	9
58	44.8	44.8	26480	44	40	187	9
59	44.8	44.8	26560	45	41.2	187	9
60	44.8	44.8	26610	46	42	187	9
61	44.8	44.8	26680	47	43	187	9
62	44.8	44.8	26720	49	43.8	187	9
63	44.8	44.8	26770	50	44.2	187	10
64	44.8	44.8	26820	51	45.1	187	10
65	44.8	44.8	26870	52	46	187	10
66	44.8	44.8	26920	53	46.6	187	10
67	44.8	44.8	26970	54	47.2	187	10
68	44.8	44.8	27020	55	48	187	10
69	44.8	44.8	27070	56	48.2	187	10

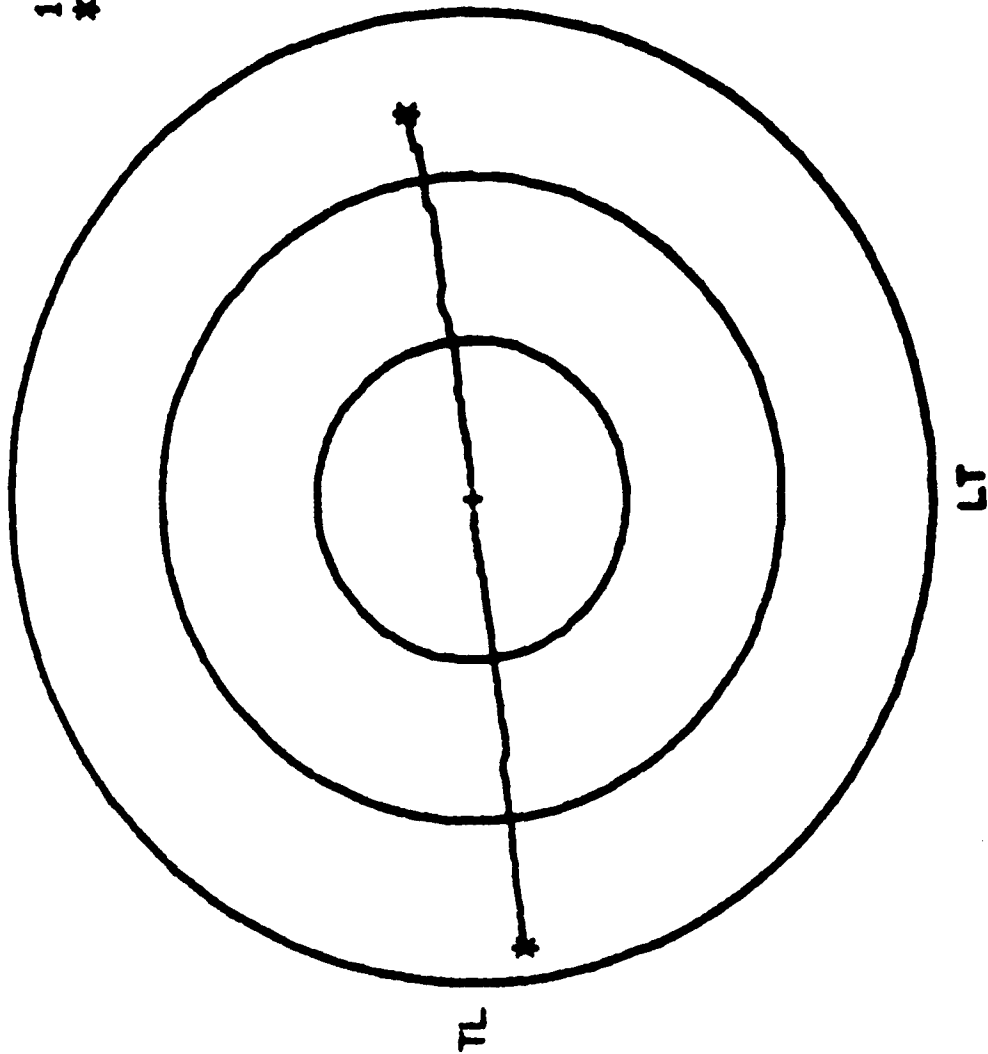
**TEST CASE 33**



SPECIMEN 7-11

TEST CASE 55

1 IN SPACING  
\* TEST STOPPED



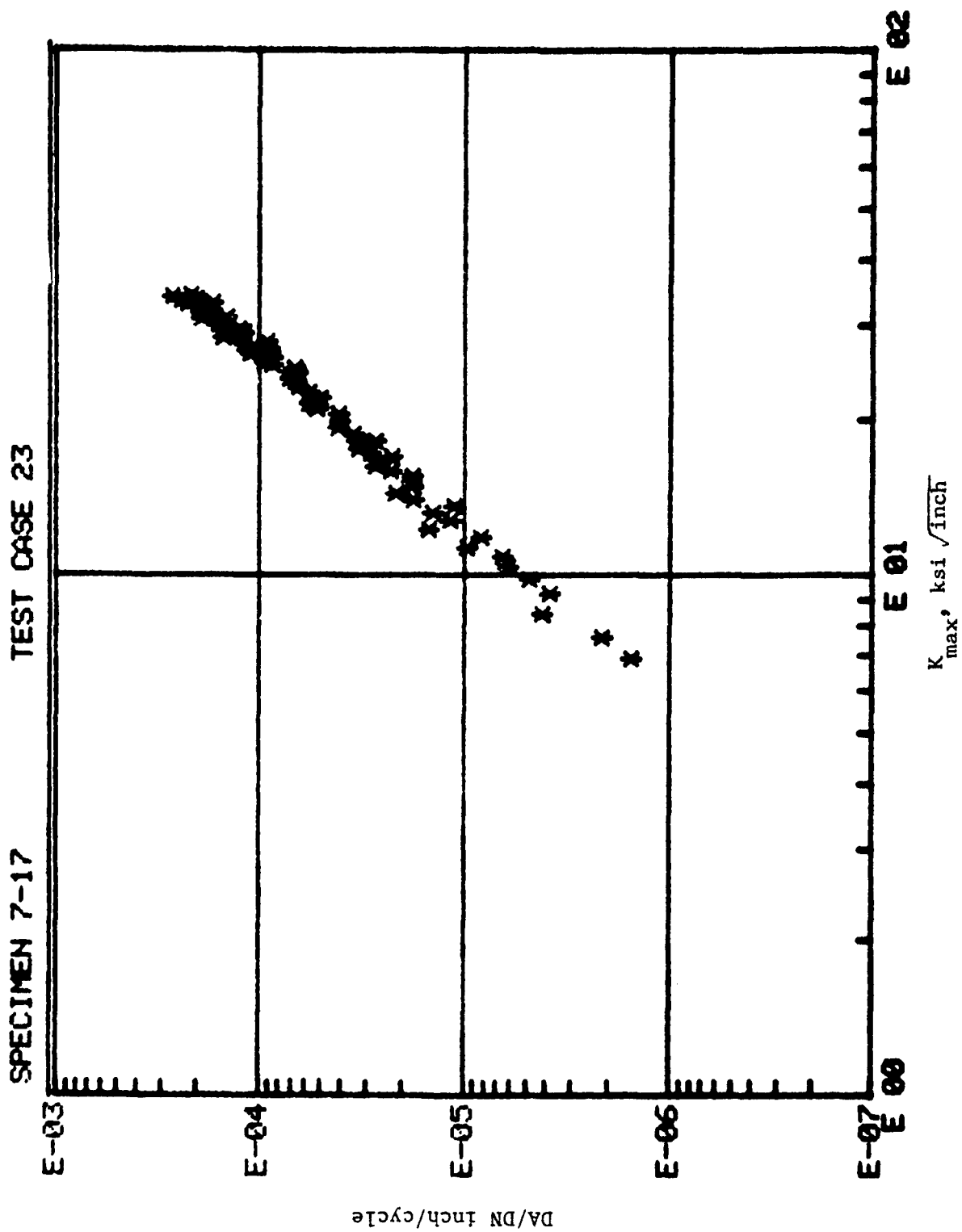
CRUCIFORM SPECIMEN TYPE SPEC. 7-17 FLAW TYPE - 1

B = .179 IN                      R(L) = .1                      R(T) = .1

BIAXIAL RATIO = 1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	29.88	29.88	0	1.8	2.1	185	0
2	29.88	29.88	11360	2.1	2.5	186	0
3	29.88	29.88	23050	2.6	3	187	0
4	29.88	29.88	31450	3.4	3.6	188	1
5	29.88	29.88	38570	4	4.1	189	2
6	29.88	29.88	43720	4.5	4.6	189	3
7	29.88	29.88	47380	5	5	189	4
8	29.88	29.88	51240	5.5	5.5	190	5
9	29.88	29.88	53820	6	6	191	6
10	29.88	29.88	56810	6.5	6.5	191	7
11	29.88	29.88	58490	7	7	192	8
12	29.88	29.88	60830	7.5	7.6	193	9
13	29.88	29.88	62410	8	8	194	10
14	29.88	29.88	64630	8.5	8.5	194	10
15	29.88	29.88	66040	9	9	195	11
16	29.88	29.88	67550	9.5	9.8	195	11
17	29.88	29.88	68520	10	10	196	12
18	29.88	29.88	70300	10.6	10.7	196	12
19	29.88	29.88	71410	11	11.1	196	12
20	29.88	29.88	72500	11.5	11.6	196	12
21	29.88	29.88	73420	12	12.1	197	13
22	29.88	29.88	74400	12.5	12.6	197	13
23	29.88	29.88	75400	13	13	197	13
24	29.88	29.88	76360	13.5	13.6	197	13
25	29.88	29.88	77120	14	14.1	197	14
26	29.88	29.88	77890	14.5	14.6	197	14
27	29.88	29.88	78810	15	15.1	197	14
28	29.88	29.88	80180	16	16	197	14
29	29.88	29.88	81330	17	16.9	197	14
30	29.88	29.88	82570	18	17.9	197	15
31	29.88	29.88	83790	19	18.9	196	16
32	29.88	29.88	84650	20	19.7	197	16
33	29.88	29.88	84790	20.1	19.9	196	16
34	29.88	29.88	85490	21	20.5	196	16
35	29.88	29.88	86530	22	21.7	196	16
36	29.88	29.88	87320	23	22.5	196	17
37	29.88	29.88	88140	24	23.6	196	18
38	29.88	29.88	88970	25	24.8	196	18
39	29.88	29.88	89680	26	25.8	195	18
40	29.88	29.88	90410	27	26.7	195	18
41	29.88	29.88	91120	28	27.6	195	18
42	29.88	29.88	91640	29	28.4	195	19
43	29.88	29.88	92120	30	29.2	194	19
44	29.88	29.88	92640	31	30	194	19
45	29.88	29.88	93050	32	30.8	194	19
46	29.88	29.88	93480	33	31.5	194	19
47	29.88	29.88	94040	34	32.5	195	19
48	29.88	29.88	94420	35	33.3	195	19
49	29.88	29.88	94910	36	34.1	195	19
50	29.88	29.88	95230	37	35	195	20

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	29.88	29.88	95560	38	35.7	194	20
52	29.88	29.88	95960	39	36.6	195	19
53	29.88	29.88	96280	40	37.2	194	19
54	29.88	29.88	96590	41	38	194	20
55	29.88	29.88	96890	42	38.9	194	20
56	29.88	29.88	97230	43	39.9	194	20
57	29.88	29.88	97440	44	40.5	194	20
58	29.88	29.88	97740	45	41.2	194	21
59	29.88	29.88	97990	46	42	194	21
60	29.88	29.88	98250	47	43	194	21
61	29.88	29.88	98520	48	43.9	193	21
62	29.88	29.88	98810	49.1	45	194	21
63	29.88	29.88	98980	50	45.6	194	21
64	29.88	29.88	99220	51	46.2	193	21
65	29.88	29.88	99410	52	47	193	21
66	29.88	29.88	99660	53	48	193	21
67	29.88	29.88	99850	54	49	193	21
68	29.88	29.88	100050	55	49.7	193	21

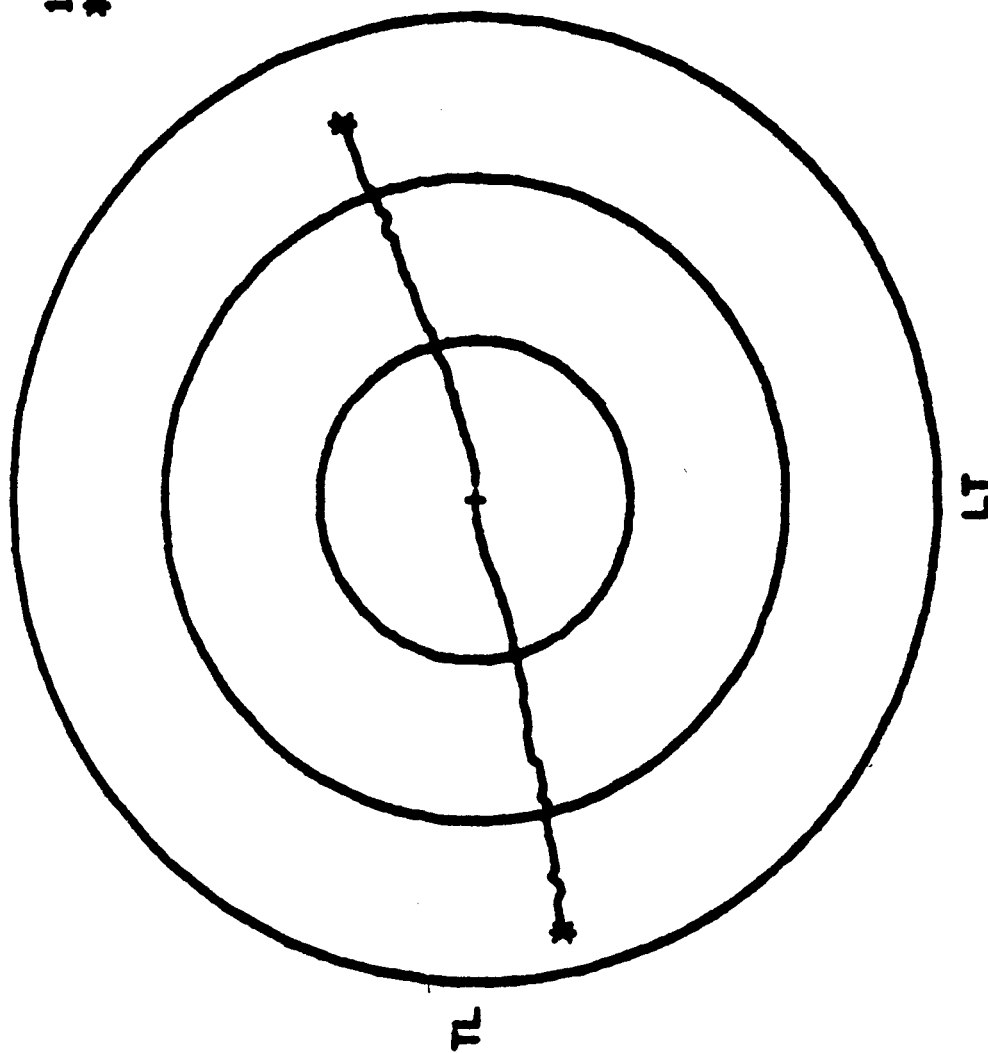




SPECIMEN 7-17

TEST CASE 23

1 IN SPACING  
\* TEST STOPPED



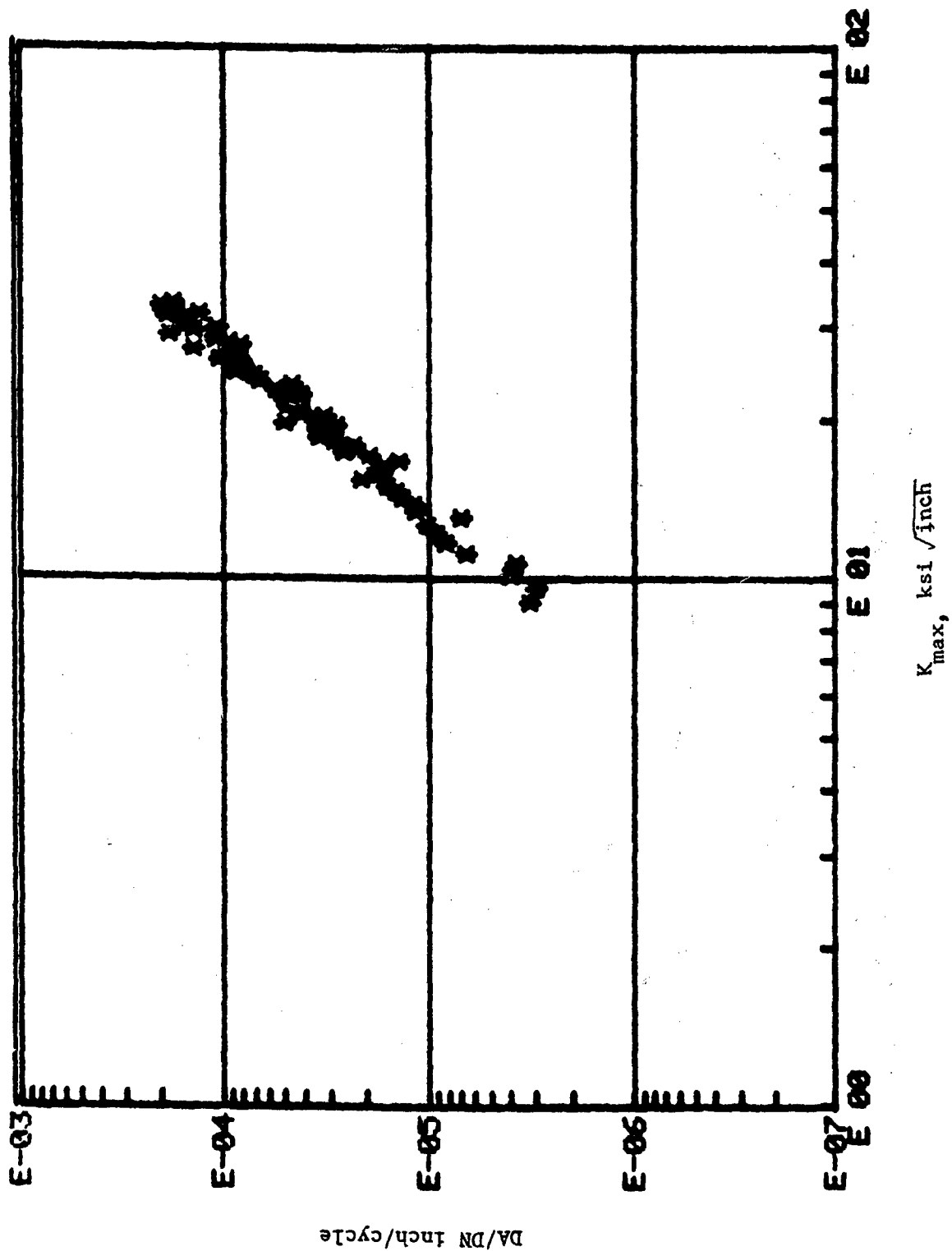
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CRACK GROWTH TEST OF 7075-T7 TEST CASE 24 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-101 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 49 % 05/20/77  
B = .177 IN R(L) = 1 R(T) = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = 1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	29.5	29.5	0	3.2	3.5	166	10
2	29.5	29.5	8540	3.8	4	166	10
3	29.5	29.5	15210	4.1	4.5	167	9
4	29.5	29.5	22090	4.7	5	167	9
5	29.5	29.5	27380	5	5.5	168	8
6	29.5	29.5	31570	5.6	6	168	7
7	29.5	29.5	34680	6.1	6.5	168	6
8	29.5	29.5	37330	6.6	7	168	6
9	29.5	29.5	40040	7.2	7.5	169	5
10	29.5	29.5	42550	7.4	8	169	5
11	29.5	29.5	44910	8	8.5	169	5
12	29.5	29.5	47030	8.5	9	170	6
13	29.5	29.5	48890	9	9.5	171	5
14	29.5	29.5	50620	9.5	10	171	4
15	29.5	29.5	52170	10	10.5	172	4
16	29.5	29.5	53340	10.5	11	172	3
17	29.5	29.5	54790	11	11.5	173	4
18	29.5	29.5	56180	11.5	12	173	4
19	29.5	29.5	57390	11.8	12.5	173	4
20	29.5	29.5	59170	12.3	13	173	4
21	29.5	29.5	60440	12.8	13.5	173	3
22	29.5	29.5	61300	13.2	14	173	3
23	29.5	29.5	62290	13.7	14.5	173	2
24	29.5	29.5	63150	14	15	174	2
25	29.5	29.5	64110	14.6	15.5	174	2
26	29.5	29.5	64840	15.1	16	175	2
27	29.5	29.5	65850	15.8	16.5	175	2
28	29.5	29.5	66500	16.2	17	175	2
29	29.5	29.5	67290	16.6	17.5	175	1
30	29.5	29.5	67740	17	18	175	1
31	29.5	29.5	68580	17.7	18.5	175	0
32	29.5	29.5	69280	18.1	19	175	0
33	29.5	29.5	69820	18.5	19.5	175	0
34	29.5	29.5	70400	19	20	176	0
35	29.5	29.5	71430	20	21	175	0
36	29.5	29.5	72420	21	22	176	0
37	29.5	29.5	73620	22	23	176	0
38	29.5	29.5	74650	23.3	24	177	0
39	29.5	29.5	75570	24	25	177	-1
40	29.5	29.5	76400	25.2	26	177	-1
41	29.5	29.5	77070	26.1	27	177	-1
42	29.5	29.5	77590	26.9	28	177	-2
43	29.5	29.5	78240	28	29	178	-2
44	29.5	29.5	78840	29	30	178	-2
45	29.5	29.5	79320	30	31	178	-2
46	29.5	29.5	79840	31	32	178	-2
47	29.5	29.5	80480	32	33	178	-2
48	29.5	29.5	80760	33	34	178	-2
49	29.5	29.5	81330	33.9	35	178	-2
50	29.5	29.5	81810	34.7	36	178	-3

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	29.5	29.5	82200	35.4	37	178	-3
52	29.5	29.5	82590	36.1	38	178	-3
53	29.5	29.5	82880	37.2	39	178	-3
54	29.5	29.5	83280	38.4	40	178	-3
55	29.5	29.5	83750	39.4	41	178	-3
56	29.5	29.5	84060	40.3	42	179	-3
57	29.5	29.5	84370	41.2	43	179	-3
58	29.5	29.5	84740	42.6	44	179	-3
59	29.5	29.5	85050	43.9	45	179	-3
60	29.5	29.5	85430	44.9	46	179	-3
61	29.5	29.5	85780	46	47	180	-4
62	29.5	29.5	86080	47.1	48	180	-4
63	29.5	29.5	86260	48.2	49	180	-4
64	29.5	29.5	86520	49	50	180	-4

# TEST CASE 24

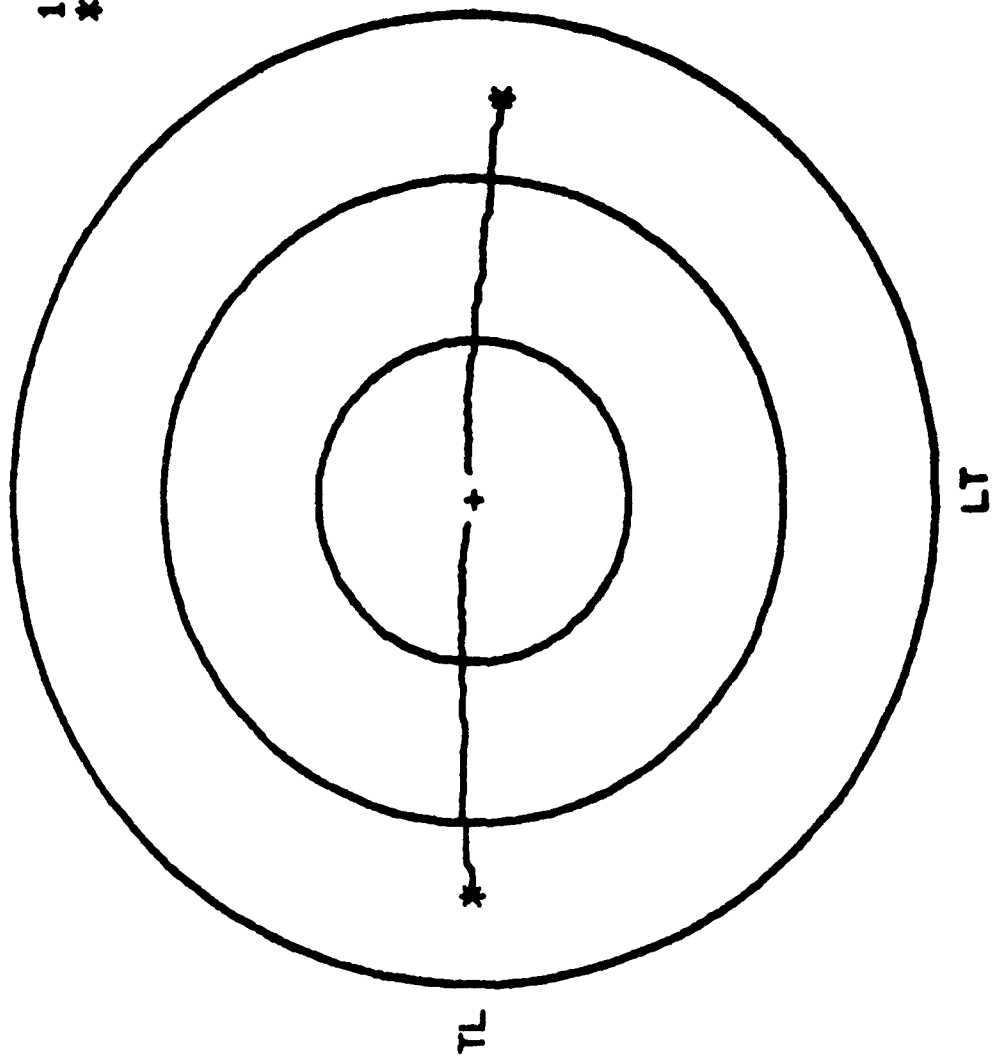
SPECIMEN 7-101



SPECIMEN 7-101

TEST CASE 24

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 141 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-38 FLAW TYPE - 1

TEMP = 76 F REL HUM = 45 % 12/83/77

B = .173 IN R(L) = .1 R(T) = .1

FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 1.25  
-----

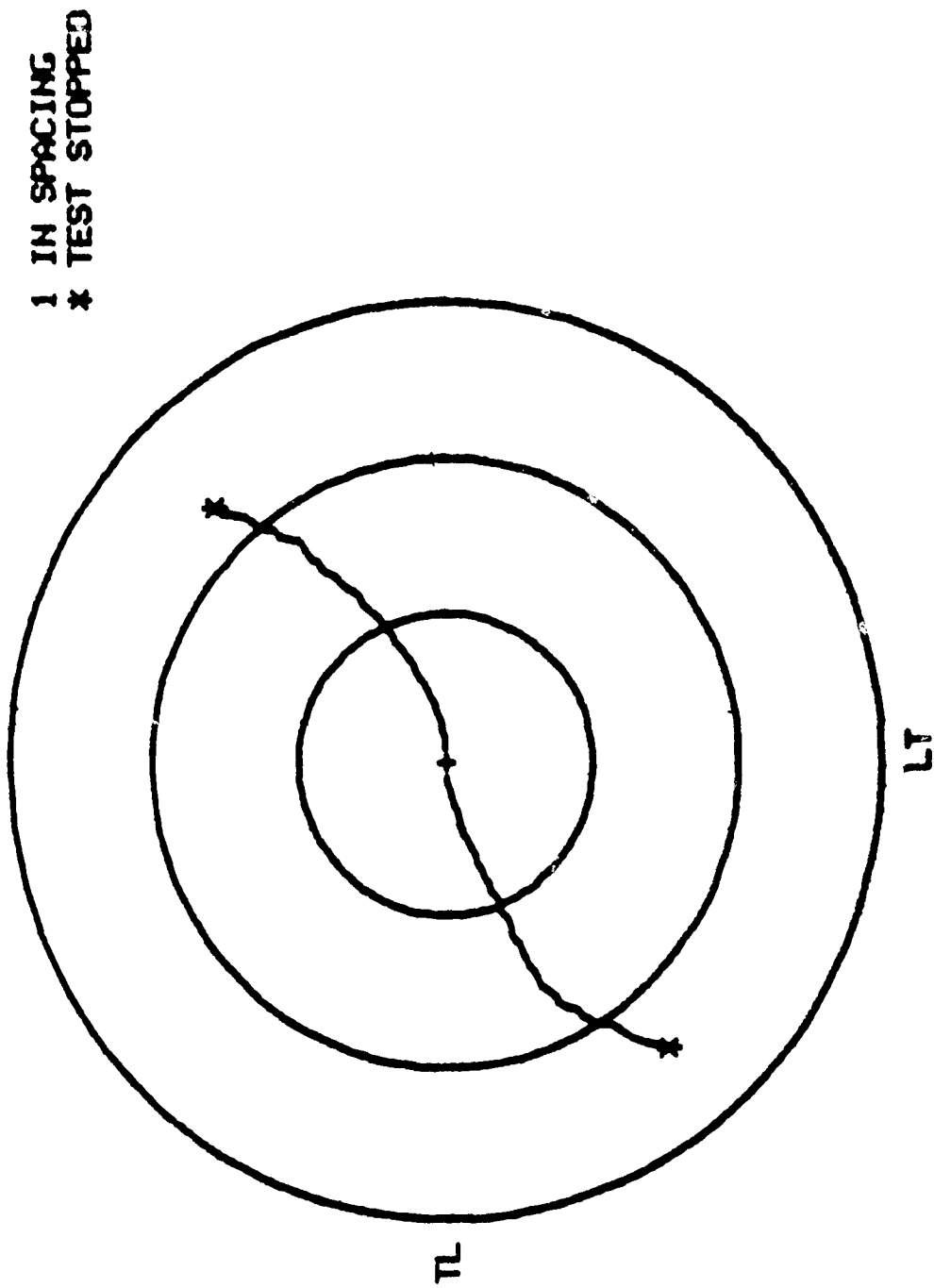
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	31.43	35.77	0	2	2	182	4
2	31.43	35.77	21300	2.5	2.5	183	4
3	31.43	35.77	34580	3	3	185	4
4	31.43	35.77	46000	3.5	3.5	186	4
5	31.43	35.77	53690	4	4	188	5
6	31.43	35.77	59980	4.5	4.6	189	6
7	31.43	35.77	63820	5	5	190	7
8	31.43	35.77	69510	5.5	5.8	190	8
9	31.43	35.77	71370	6	6.1	191	9
10	31.43	35.77	74540	6.5	6.7	192	10
11	31.43	35.77	76430	7	7.1	193	11
12	31.43	35.77	79110	7.5	7.8	193	11
13	31.43	35.77	80190	8	8	193	12
14	31.43	35.77	82360	8.5	8.7	193	13
15	31.43	35.77	83600	9	9	194	14
16	31.43	35.77	85050	9.5	9.6	194	14
17	31.43	35.77	85870	10	10	195	15
18	31.43	35.77	88620	11	11	196	16
19	31.43	35.77	90740	12	12	198	18
20	31.43	35.77	92410	13	13	198	19
21	31.43	35.77	93830	14	13.8	198	19
22	31.43	35.77	95300	15	14.8	199	20
23	31.43	35.77	96580	16	15.8	199	21
24	31.43	35.77	98010	17	16.7	200	22
25	31.43	35.77	99120	18	17.7	200	23
26	31.43	35.77	100150	19	18.5	201	23
27	31.43	35.77	101040	20	19.3	201	24
28	31.43	35.77	101920	21	20.1	201	25
29	31.43	35.77	102850	22	21.1	202	25
30	31.43	35.77	103870	23	22.2	202	26
31	31.43	35.77	104490	24	23	202	27
32	31.43	35.77	105190	25	24	202	28
33	31.43	35.77	105870	26	24.7	203	28
34	31.43	35.77	106500	27	25.2	203	28
35	31.43	35.77	107190	28	26.2	203	29
36	31.43	35.77	107740	29	27	203	30
37	31.43	35.77	108290	30	28	204	31
38	31.43	35.77	108880	31	28.8	204	31
39	31.43	35.77	109330	32	29.6	204	32
40	31.43	35.77	109770	33	30.3	205	33
41	31.43	35.77	110290	34.2	31.2	206	33
42	31.43	35.77	110610	35	31.8	206	33
43	31.43	35.77	111020	36	32.8	207	34
44	31.43	35.77	111600	37.1	34.2	209	34
45	31.43	35.77	112000	38.1	35.7	209	34
46	31.43	35.77	112300	39	36.7	210	36
47	31.43	35.77	112550	40	37.6	211	37
48	31.43	35.77	113050	41	38.8	213	37
49	31.43	35.77	113400	42	40	214	39
50	31.43	35.77	114000	44.1	42.5	215	40



REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	31.43	35.77	114350	46.1	44.4	217	42
52	31.43	35.77	114510	47	45.2	218	43
53	31.43	35.77	114650	48	46.1	219	43

SPECIMEN 7-38

TEST CASE 141



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 68 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-28 FLAW TYPE - 1

TEMP = 70 F REL HUM = 47 % 09/11/77

B = .170 IN R(L) = .1 R(T) = .1

FREQ = 5 Hz PHASE ANGLE = 0 GRID SPACING = .05 IN

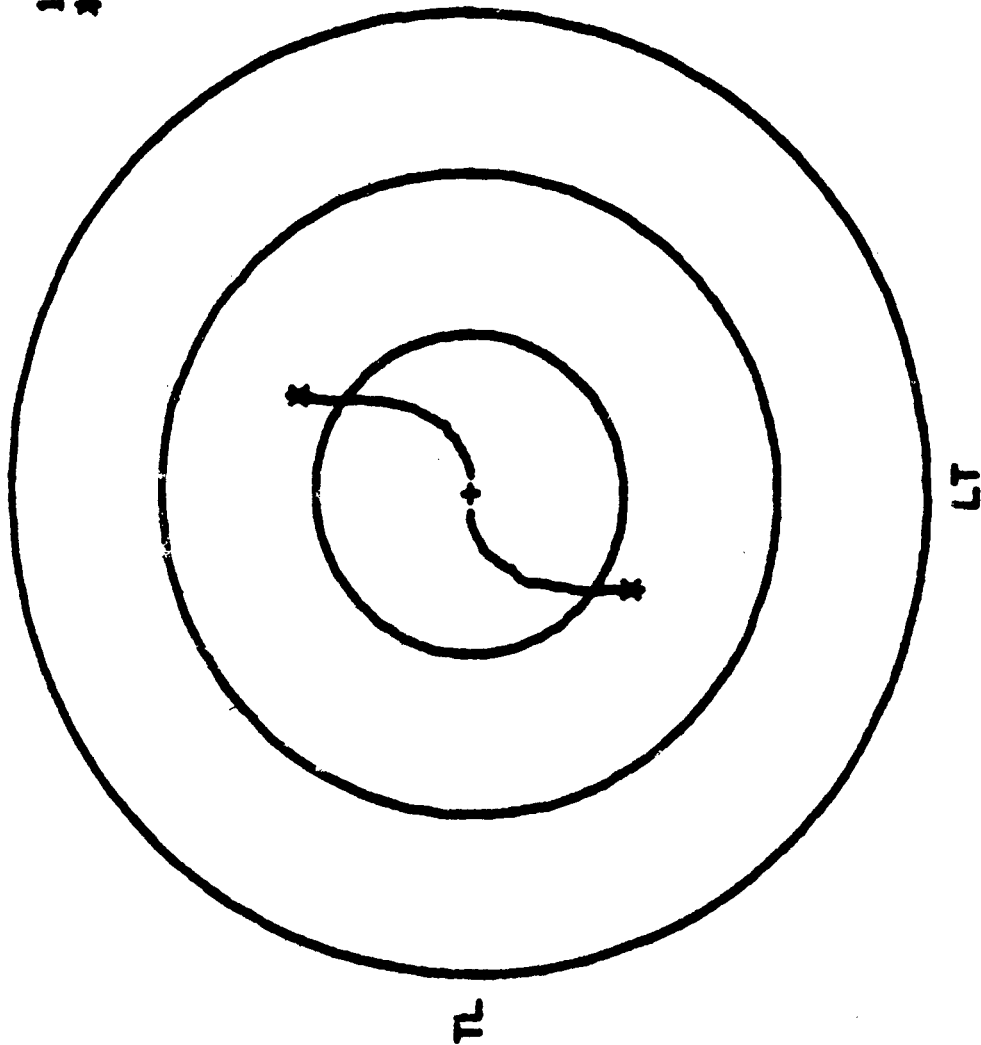
BIAXIAL RATIO = 1.5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	32.99	41.66	0	2.4	2.4	180	0
2	32.99	41.66	13200	3	2.9	181	0
3	32.99	41.66	22100	3.5	3.5	182	3
4	32.99	41.66	28990	4	4	184	5
5	32.99	41.66	33900	4.5	4.6	186	8
6	32.99	41.66	37600	5	5	188	11
7	32.99	41.66	41000	5.5	5.6	189	12
8	32.99	41.66	43700	6	6.1	191	14
9	32.99	41.66	45900	6.5	6.6	192	15
10	32.99	41.66	47720	7	7.1	194	16
11	32.99	41.66	49350	7.5	7.6	196	19
12	32.99	41.66	51000	8	8.1	198	21
13	32.99	41.66	52150	8.5	8.5	200	21
14	32.99	41.66	53400	9	9	203	21
15	32.99	41.66	54630	9.5	9.7	204	25
16	32.99	41.66	55810	10	10.2	206	27
17	32.99	41.66	56630	10.5	10.7	208	29
18	32.99	41.66	57600	11	11.2	211	31
19	32.99	41.66	58450	11.5	11.7	211	33
20	32.99	41.66	59300	12	12.3	211	34
21	32.99	41.66	59800	12.5	12.7	212	35
22	32.99	41.66	60500	13	13.1	213	36
23	32.99	41.66	61050	13.5	13.6	215	38
24	32.99	41.66	61630	14	14.2	218	40
25	32.99	41.66	61900	14.5	14.7	220	42
26	32.99	41.66	62370	15	15.2	222	43
27	32.99	41.66	63050	16	16.3	224	46
28	32.99	41.66	63550	17	17.3	227	49
29	32.99	41.66	64020	18	18.7	229	52
30	32.99	41.66	64360	19	19.8	231	55
31	32.99	41.66	64680	20	21.2	233	58
32	32.99	41.66	65150	22	23.6	238	61
33	32.99	41.66	65300	23	24.5	239	61
34	32.99	41.66	65420	24	25.2	241	62

SPECIMEN 7-28

TEST CASE 68

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 142 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-4 FLAW TYPE - 1

TEMP = 75 F REL HUM = 56 % 12-9-77

B = .18 IN R(L) = .1 R(T) = .1

FREQ = 5 HZ PHASE ANGLE = 0° GRID SPACING = .05 IN

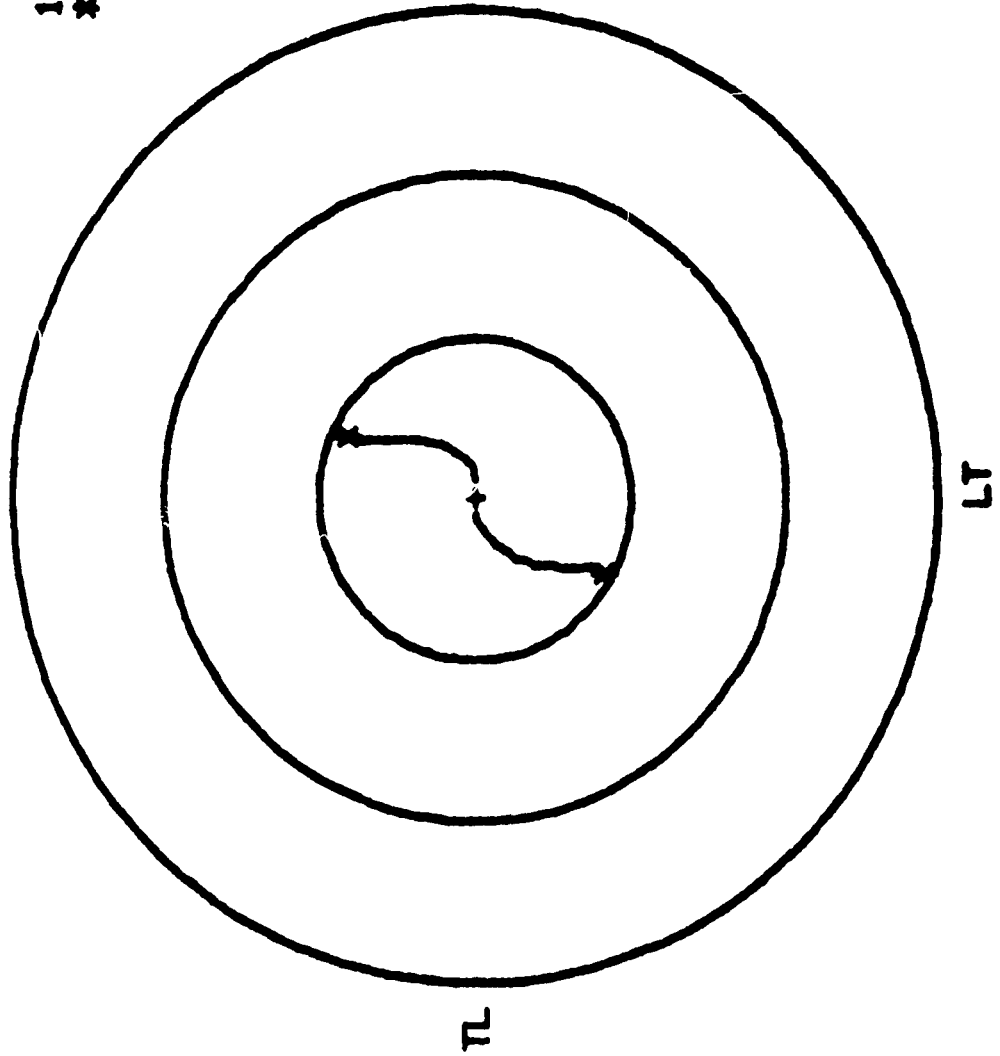
BIAXIAL RATIO = 1.75  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	34.55	47.57	0	1.9	2.4	173	1
2	34.55	47.57	11790	2.5	3	182	3
3	34.55	47.57	21200	3	3.6	184	4
4	34.55	47.57	26170	3.5	4.1	189	6
5	34.55	47.57	29850	4	4.6	194	11
6	34.55	47.57	32500	4.5	5	197	16
7	34.55	47.57	36640	5.5	5.9	201	22
8	34.55	47.57	38800	6.1	6.3	203	24
9	34.55	47.57	39650	6.5	6.7	205	27
10	34.55	47.57	40740	7	7.1	208	29
11	34.55	47.57	41740	7.5	7.6	210	32
12	34.55	47.57	42700	8	8	213	34
13	34.55	47.57	43910	9	8.8	214	38
14	34.55	47.57	44300	9.5	9	217	40
15	34.55	47.57	44910	10	9.5	220	42
16	34.55	47.57	45760	11.1	10.5	222	46
17	34.55	47.57	46220	12	11.3	226	50
18	34.55	47.57	46690	13	12.4	230	54
19	34.55	47.57	47030	14	13.5	232	57
20	34.55	47.57	47240	15	14	235	59
21	34.55	47.57	47580	16	15.5	237	62
22	34.55	47.57	47730	17	16.1	240	64
23	34.55	47.57	47880	18	17.1	241	64
24	34.55	47.57	47990	19	18	241	65

SPECIMEN 7-4

TEST CASE 142

1 IN SPACING  
\* TEST STOPPED





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CRACK GROWTH TEST OF 7075-T7      SPEC LT-7-1

CCT SPECIMEN TYPE      TEST CASE 1

TEMP = 75 F      REL HUM = 51 %      4-15-77

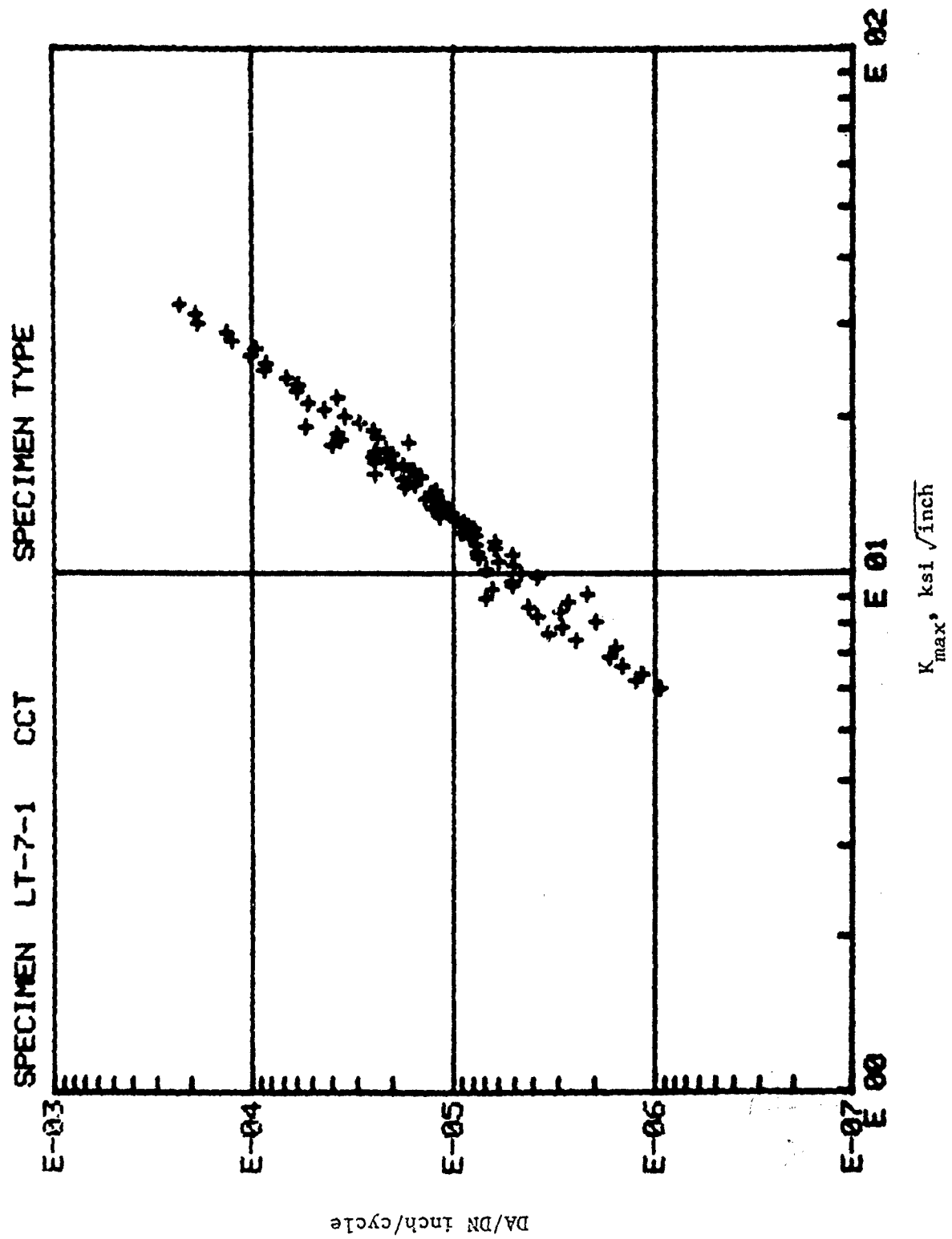
W = 6.99 IN      B = .179 IN      R = .1

FREQUENCY = 10 HZ      LAB AIR ENVIRONMENT

GRID SPACING = .05 IN      FILE CODE: SLT71  
-----

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	7.5	0	6.5	6	7	6
2	7.5	26500	7	6.6	7.4	6.5
3	7.5	40400	7.3	7	7.8	6.8
4	7.5	62200	7.9	7.5	8.3	7.2
5	7.5	77600	8.2	8	8.7	7.8
6	7.5	100930	9	8.7	9.6	8.5
7	7.5	122650	9.7	9.5	10.1	9.2
8	7.5	134040	10.3	10	10.8	9.8
9	7.5	141520	10.8	10.5	11.2	10.2
10	7.5	151100	11.3	11	11.8	10.8
11	7.5	162500	11.9	11.5	12.2	11.1
12	7.5	169990	12.4	12	12.8	11.8
13	7.5	177950	13	12.5	13.2	12.2
14	7.5	193510	13.2	13	13.6	13
15	7.5	192310	13.9	13.5	14.1	13.2
16	7.5	195590	14.5	14	14.6	13.4
17	7.5	206470	14.8	14.5	15.1	14
18	7.5	210770	15.4	15	15.8	14.4
19	7.5	215160	15.8	15.5	16.1	15
20	7.5	220500	16.3	16	16.6	15.7
21	7.5	226660	16.9	16.5	17.1	16
22	7.5	230460	17.3	17	17.2	16.4
23	7.5	235680	18	17.5	18.2	17.1
24	7.5	239390	18.2	18	18.5	17.6
25	7.5	244210	18.8	18.5	19.2	18.1
26	7.5	247210	19.2	19	19.6	18.6
27	7.5	252360	19.8	19.5	20.1	19.1
28	7.5	255990	20.3	20	20.7	19.7
29	7.5	259620	20.9	20.5	21	20.1
30	7.5	263990	21.5	21	21.9	20.8
31	7.5	266990	21.9	21.5	22.3	21
32	7.5	269990	22.4	22	22.7	21.6
33	7.5	272860	22.9	22.5	23.1	22
34	7.5	275730	23.3	23	23.6	22.7
35	7.5	278730	23.8	23.5	24.2	23
36	7.5	281530	24.2	24	24.7	23.5
37	7.5	284480	24.8	24.5	25.2	24
38	7.5	286820	25.2	25	25.6	24.5
39	7.5	289060	25.7	25.5	26.1	25.1
40	7.5	291210	26.2	26	26.6	25.4
41	7.5	293380	26.7	26.5	27	26
42	7.5	295330	27.1	27	27.7	26.4
43	7.5	297450	27.6	27.5	28.1	27
44	7.5	299310	28	28	28.4	27.5
45	7.5	301300	28.5	28.5	29.1	28
46	7.5	303250	29	29	29.7	28.4
47	7.5	305190	29.5	29.5	30.2	28.9
48	7.5	307020	30	30	30.6	29.3
49	7.5	308730	30.6	30.5	31.2	30
50	7.5	310180	31	31	31.8	30.3

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
51	7.5	311830	31.6	31.5	32.3	30.9
52	7.5	312950	32	32	32.9	31
53	7.5	314510	32.4	32.5	33.2	31.6
54	7.5	315500	33	33	33.8	32
55	7.5	317240	33.4	33.5	34.5	32.5
56	7.5	318300	33.8	34	34.8	33
57	7.5	319720	34.3	34.5	35.2	33.6
58	7.5	320600	34.8	35	35.7	34
59	7.5	321930	35.3	35.5	36.2	34.6
60	7.5	322930	35.7	36	36.9	35
61	7.5	323990	36.1	36.5	37.2	35.5
62	7.5	324860	36.6	37	37.6	35.8
63	7.5	325960	37.2	37.5	38	36.2
64	7.5	326770	37.8	38	38.7	37
65	7.5	327810	38.1	38.5	39.1	37.2
66	7.5	328570	38.6	39	39.6	37.9
67	7.5	329460	39	39.5	40.1	38.2
68	7.5	330290	39.5	40	40.8	39
69	7.5	331140	40.1	40.5	41.2	39.2
70	7.5	331670	40.8	41	41.7	39.8
71	7.5	333220	41.5	42	42.6	40.8
72	7.5	334700	42.6	43	43.8	41.8
73	7.5	335870	43.6	44	44.7	42.7
74	7.5	336830	44.5	45	45.9	43.6
75	7.5	337960	45.3	46	46.8	44.3
76	7.5	338820	46.2	47	48	45.3
77	7.5	339560	47	48	48.8	46.2
78	7.5	340270	48	49	49.7	47.1
79	7.5	340820	48.8	50	50.9	47.9
80	7.5	341390	49.6	51	52	48.9
81	7.5	341860	50.4	52	53.2	49.7
82	7.5	342200	51.3	53	53.8	50.4
83	7.5	342690	52.4	54	54.8	51.4
84	7.5	343020	53	55	55.9	52.2
85	7.5	343300	54	56	57	53.2
86	7.5	343530	54.9	57	58	53.8
87	7.5	343750	55.8	58	58.9	55



CRACK GROWTH TEST OF 7075-T7

SPEC LT-7-3

CCT SPECIMEN TYPE

TEST CASE 2

TEMP = 80 F

REL HUM = 50 %

4-11-77

W = 7.012 IN

B = .177 IN

R = .1

FREQUENCY = 5 HZ

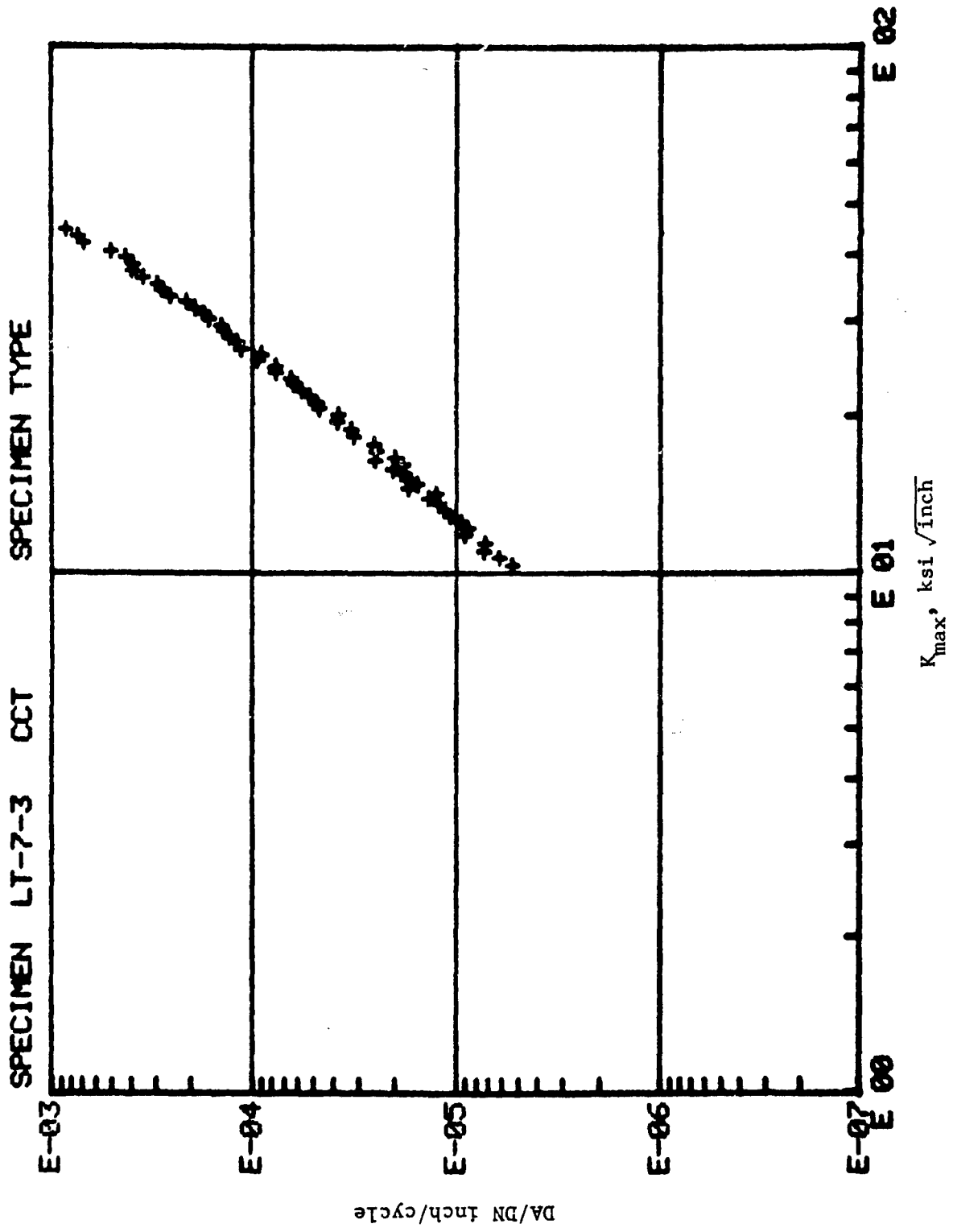
LAB AIR ENVIRONMENT

GRID SPACING = .05 IN

FILE CODE: #LT73

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	13	0	6.1	6	7	5.6
2	13	4010	6.6	6.5	7.3	6
3	13	7880	7	7	7.8	6.5
4	13	11320	7.6	7.5	8.3	6.9
5	13	14280	8	8	8.7	7.3
6	13	17440	8.7	8.5	9.3	7.8
7	13	19850	9.1	9	9.7	8.2
8	13	22730	9.6	9.6	10.2	8.8
9	13	24870	10.1	10	10.6	9.3
10	13	27170	10.6	10.6	11.1	9.8
11	13	29210	11.1	11.1	11.6	10.3
12	13	30760	11.6	11.5	12	10.7
13	13	32760	12	12	12.6	11.2
14	13	34140	12.5	12.5	13	11.7
15	13	35750	13	13	13.5	12.2
16	13	37250	13.5	13.5	14	12.8
17	13	38580	13.9	14	14.4	13.4
18	13	39980	14.5	14.6	15	13.9
19	13	41140	14.9	15	15.4	14.4
20	13	42140	15.3	15.6	16	14.8
21	13	42900	15.6	16	16.3	15
22	13	45230	16.7	17.1	17.5	16.2
23	13	46760	17.5	18	18.1	17
24	13	48400	18.5	19	19.2	18.1
25	13	49970	19.6	20	20.1	19.2
26	13	51240	20.5	21	21.1	20.2
27	13	52540	21.5	22	22	21.2
28	13	53500	22.2	23	23	22.1
29	13	54520	23.1	24	23.9	23.2
30	13	55450	24.1	25	24.7	24.3
31	13	56238	24.8	26	25.6	25.3
32	13	57025	25.8	27	26.7	26.1
33	13	57749	26.9	28	27.4	27
34	13	58454	28	29	28.6	28
35	13	59090	29	30	29.5	29
36	13	59625	29.8	31	30.6	30.1
37	13	60110	30.7	32	31.4	30.9
38	13	60626	32	33	32.6	32.1
39	13	61029	32.9	34	33.6	33
40	13	61429	33.9	35	34.5	34.2
41	13	61739	34.6	36	35.4	35
42	13	62076	35.4	37	36.4	36
43	13	62376	36.4	38	37.3	37
44	13	62638	37.1	39	38.2	38
45	13	62896	38.1	40	39.1	39
46	13	63117	39.1	41	39.9	39.9
47	13	63325	40.2	42	40.9	41
48	13	63481	41	43	41.6	42
49	13	63656	42	44	42.7	43
50	13	63801	43	45	43.7	44

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
51	13	63934	43.9	46	44.9	45.1
52	13	64057	44.9	47	45.7	46.1
53	13	64175	45.8	48	46.7	47.2
54	13	64267	46.7	49	47.5	48.2
55	13	64344	47.7	50	48.5	49.4
56	13	64398	48.3	51	49.1	50.4
57	13	64448	49	52	49.9	51.3





CRACK GROWTH TEST OF 7075-T7

SPEC LT-7-4

CCT SPECIMEN TYPE TEST CASE 123

TEMP = 74 F

REL HUM = 60 %

4-26-77

W = 7 IN

B = .179 IN

R = .1

FREQUENCY = 20 HZ

LAB AIR ENVIRONMENT

GRID SPACING = .05 IN

FILE CODE: \$LT74

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	6	0	5.4	6.7	5.6	6
2	6	118570	6.2	7.2	6.2	6.7
3	6	178060	6.6	7.6	6.6	7
4	6	267940	7.1	8.2	7.2	7.5
5	6	334330	7.6	8.7	7.7	8
6	6	392440	8.1	9.3	8.3	8.5
7	6	435800	8.6	9.9	8.9	9
8	6	483970	9.1	10.7	9.7	9.5
9	6	531020	9.9	11.3	10.4	10.2
10	6	550860	10.2	11.8	10.9	10.7
11	6	562290	10.5	12	11.1	11
12	6	590200	11.1	12.7	11.8	11.6
13	6	606120	11.4	13.1	12.2	12
14	6	622490	11.9	13.7	12.8	12.5
15	6	644010	12.5	14.4	13.5	13
16	6	661220	13.1	15.1	14.1	13.5
17	6	676960	13.7	15.7	14.6	14.2
18	6	701650	14.6	16.8	15.9	15.1
19	6	711130	15	17.2	16.4	15.6
20	6	719530	15.4	17.7	16.8	16
21	6	730560	16	18.2	17.3	16.5
22	6	741680	16.6	18.9	18	17
23	6	757390	17.4	19.8	18.9	18
24	6	766350	18	20.3	19.5	18.5
25	6	773700	18.5	20.9	20	19
26	6	781200	19	21.4	20.5	19.5
27	6	788010	19.4	21.9	21	20



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 7 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-48 FLAW TYPE = 1

TEMP = 73 F REL HUM = 50% 5-24-77

B = .18 IN R(L) = .1 R(T) = .1

FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

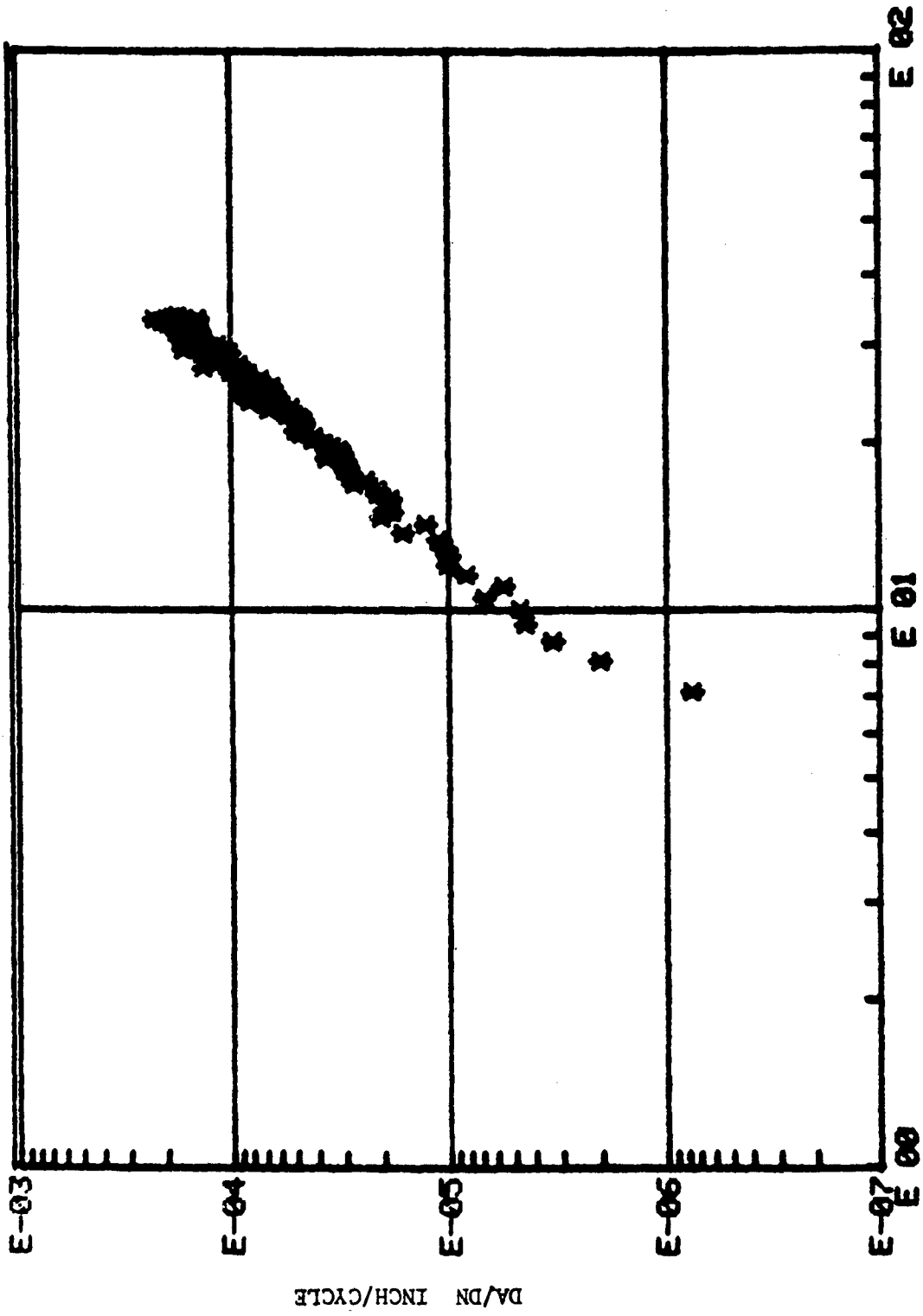
BIAXIAL RATIO = 0  
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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	23.65	6.3	0	2	1.7	180	0
2	23.65	6.3	55610	3	2.4	180	0
3	23.65	6.3	67930	3.5	2.9	180	0
4	23.65	6.3	75450	4	3.4	180	0
5	23.65	6.3	81620	4.5	4	180	0
6	23.65	6.3	86450	5	4.4	180	0
7	23.65	6.3	90180	5.5	4.9	180	0
8	23.65	6.3	95020	6	5.5	180	0
9	23.65	6.3	98810	6.5	6	180	0
10	23.65	6.3	100240	7	6.4	180	0
11	23.65	6.3	103840	7.5	7	179	0
12	23.65	6.3	105190	8	7.4	178	0
13	23.65	6.3	107640	8.5	8	178	0
14	23.65	6.3	109180	9	8.5	178	0
15	23.65	6.3	111730	9.5	9.3	178	0
16	23.65	6.3	112960	10	9.8	178	0
17	23.65	6.3	114280	10.5	10.2	178	0
18	23.65	6.3	115640	11	10.8	178	0
19	23.65	6.3	117000	11.5	11.3	178	1
20	23.65	6.3	118180	12	11.8	178	1
21	23.65	6.3	119250	12.5	12.2	177	1
22	23.65	6.3	120260	13	12.8	177	1
23	23.65	6.3	121310	13.5	13.3	177	1
24	23.65	6.3	122300	14	13.9	177	1
25	23.65	6.3	123140	14.5	14.4	177	1
26	23.65	6.3	123980	15	14.9	177	1
27	23.65	6.3	124740	15.5	15.3	177	1
28	23.65	6.3	125430	16	15.8	177	1
29	23.65	6.3	126250	16.5	16.3	177	1
30	23.65	6.3	127110	17	16.9	178	1
31	23.65	6.3	127840	17.5	17.4	178	1
32	23.65	6.3	128510	18	17.9	178	1
33	23.65	6.3	129110	18.5	18.4	178	1
34	23.65	6.3	129720	19	18.9	178	1
35	23.65	6.3	130250	19.5	19.4	177	2
36	23.65	6.3	130750	20	19.9	177	2
37	23.65	6.3	131260	20.5	20.4	177	2
38	23.65	6.3	131750	21	20.8	178	2
39	23.65	6.3	132350	21.5	21.4	178	2
40	23.65	6.3	132920	22	22	178	2
41	23.65	6.3	133420	22.5	22.6	178	2
42	23.65	6.3	133870	23	23.1	178	2
43	23.65	6.3	134280	23.5	23.7	177	2
44	23.65	6.3	134850	24	24.4	177	2
45	23.65	6.3	135240	24.5	24.8	177	2
46	23.65	6.3	135610	25.1	25.4	178	2
47	23.65	6.3	135970	25.5	25.9	178	2
48	23.65	6.3	136300	26	26.3	178	2
49	23.65	6.3	136620	26.5	26.9	178	2
50	23.65	6.3	136980	27	27.3	178	2

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	23.65	6.3	137360	27.5	27.9	178	2
52	23.65	6.3	137700	28	28.4	178	1
53	23.65	6.3	138090	28.5	28.9	178	1
54	23.65	6.3	138470	29	29.5	178	1
55	23.65	6.3	138780	29.5	30.1	178	2
56	23.65	6.3	139087	30	30.5	178	2
57	23.65	6.3	139380	30.5	31	178	2
58	23.65	6.3	139680	31	31.5	178	2
59	23.65	6.3	139983	31.5	32	178	2
60	23.65	6.3	140258	32	32.6	178	2
61	23.65	6.3	140523	32.5	33.1	177	2
62	23.65	6.3	140731	33	33.7	177	2
63	23.65	6.3	141050	33.5	34.5	177	2
64	23.65	6.3	141268	34	34.8	177	2
65	23.65	6.3	141579	34.5	35.6	177	2
66	23.65	6.3	141792	35	36	177	2
67	23.65	6.3	142039	35.5	36.8	177	2
68	23.65	6.3	142248	36	37.2	177	2
69	23.65	6.3	142441	36.5	37.7	177	2
70	23.65	6.3	142664	37	38.1	177	2
71	23.65	6.3	142930	37.5	38.9	177	2
72	23.65	6.3	143098	38	39.5	177	2
73	23.65	6.3	143300	38.5	40	177	2
74	23.65	6.3	143509	39	40.6	177	2
75	23.65	6.3	143728	39.5	41.1	177	2
76	23.65	6.3	143899	40	41.7	177	2
77	23.65	6.3	144097	40.5	42.3	177	1
78	23.65	6.3	144263	41	42.9	178	1
79	23.65	6.3	144461	41.5	43.5	177	1
80	23.65	6.3	144622	42	43.9	177	1
81	23.65	6.3	144844	42.5	44.8	177	1
82	23.65	6.3	145001	43	45.4	178	1
83	23.65	6.3	145181	43.5	45.9	178	1
84	23.65	6.3	145296	44	46.2	178	1
85	23.65	6.3	145502	44.5	46.9	178	1
86	23.65	6.3	145645	45	47.4	178	1
87	23.65	6.3	145839	45.5	48	178	1
88	23.65	6.3	145968	46	48.5	178	1
89	23.65	6.3	146135	46.5	49	178	1
90	23.65	6.3	146269	47	49.6	178	1
91	23.65	6.3	146444	47.5	50.1	178	1
92	23.65	6.3	146567	48	50.7	178	1
93	23.65	6.3	146746	48.5	51.2	178	1
94	23.65	6.3	146908	49	51.9	178	1
95	23.65	6.3	147823	49.5	52.2	178	1

TEST CASE 7

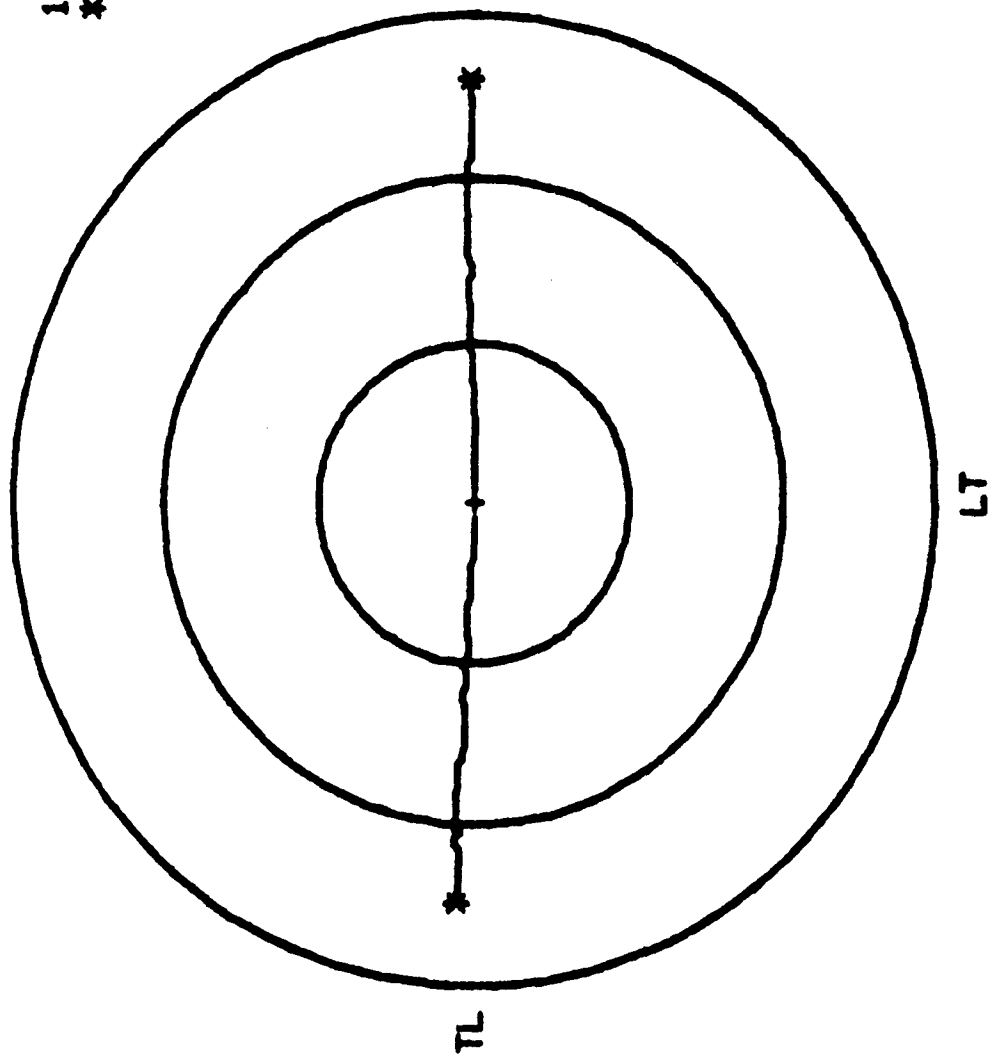
SPECIMEN 7-48



SPECIMEN 7-48

TEST CASE 7

1 IN SPACING  
\* TEST STOPPED





CRACK GROWTH TEST OF 7075-T7 TEST CASE 8 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-1 FLAW TYPE - 7

TEMP = 74 F REL HUM = 52 % 02-02-78

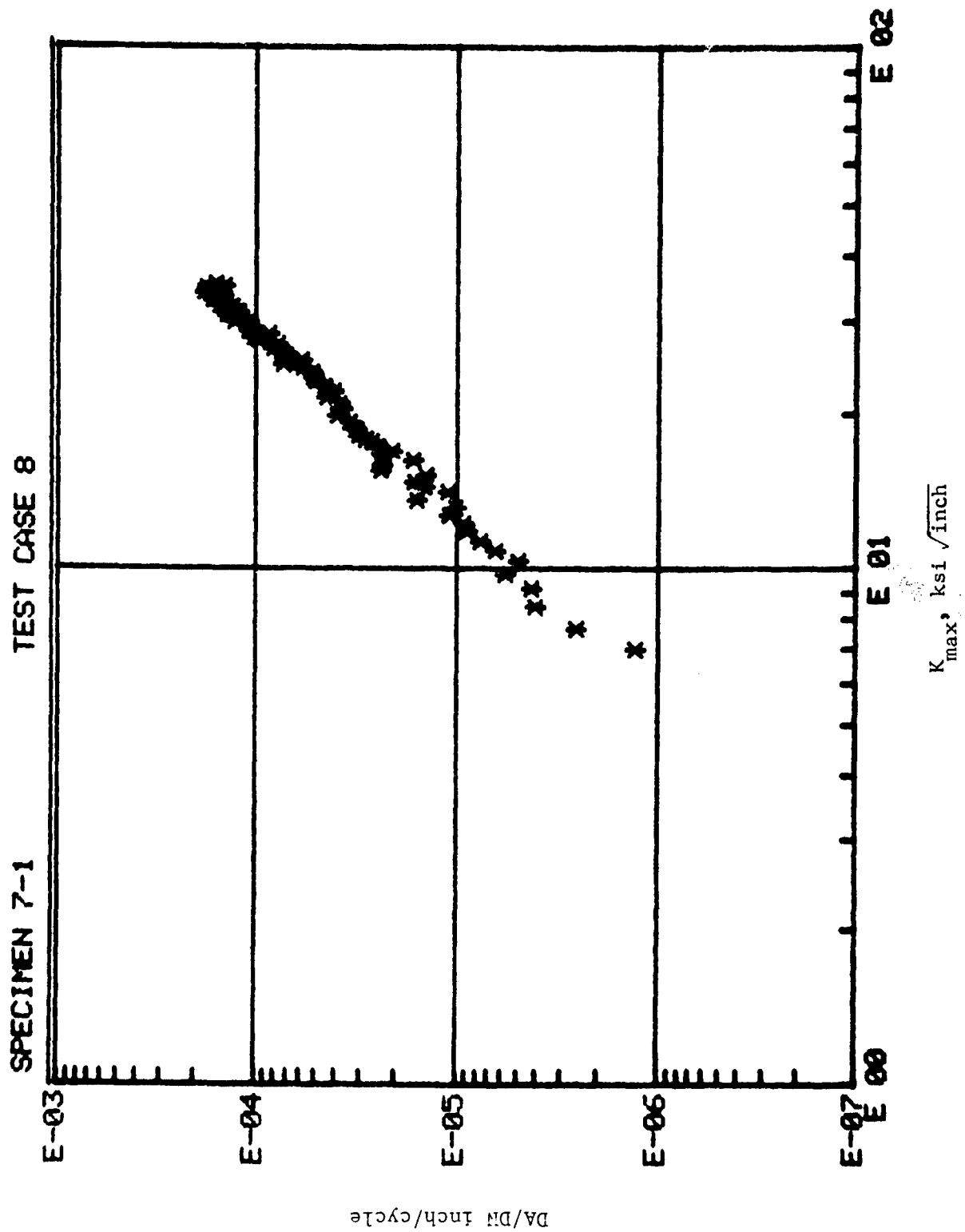
B = .182 IN R(L) = .1 R(T) = .1

FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 0

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	23.65	6.3	0	2	2	181	0
2	23.65	6.3	13410	2.5	2.2	181	0
3	23.65	6.3	24220	3	2.8	181	0
4	23.65	6.3	31000	3.5	3.4	181	0
5	23.65	6.3	37450	4	4	181	0
6	23.65	6.3	41830	4.5	4.5	181	0
7	23.65	6.3	46830	5	5	181	0
8	23.65	6.3	50730	5.5	5.5	180	-1
9	23.65	6.3	54000	6	6	180	-1
10	23.65	6.3	56790	6.5	6.5	180	-1
11	23.65	6.3	59460	7	7	180	-1
12	23.65	6.3	61760	7.5	7.5	180	-2
13	23.65	6.3	64240	8	8	180	-2
14	23.65	6.3	66290	8.6	8.7	180	-2
15	23.65	6.3	67870	9	9	180	-2
16	23.65	6.3	69590	9.5	9.5	180	-2
17	23.65	6.3	71280	10	10.1	180	-2
18	23.65	6.3	73030	10.5	10.6	180	-2
19	23.65	6.3	74080	11	11.1	180	-2
20	23.65	6.3	75360	11.5	11.8	180	-2
21	23.65	6.3	76570	12	12.1	180	-2
22	23.65	6.3	77860	12.5	12.8	180	-2
23	23.65	6.3	78810	13	13.1	180	-2
24	23.65	6.3	80030	13.5	13.8	180	-2
25	23.65	6.3	80790	14	14.1	180	-2
26	23.65	6.3	81670	14.5	14.6	180	-2
27	23.65	6.3	82410	15	15	180	-2
28	23.65	6.3	83990	16	16	180	-2
29	23.65	6.3	85390	17	16.9	179	-2
30	23.65	6.3	86720	18	18	179	-2
31	23.65	6.3	88060	19	19	179	-2
32	23.65	6.3	89360	20	20	179	-2
33	23.65	6.3	90430	21	20.9	179	-2
34	23.65	6.3	91760	22.1	22	179	-2
35	23.65	6.3	92810	23	23	179	-1
36	23.65	6.3	93850	24	24.1	179	-1
37	23.65	6.3	94870	25	25.2	179	-1
38	23.65	6.3	95820	26	26.2	179	-1
39	23.65	6.3	96680	27	27.2	179	-1
40	23.65	6.3	97300	28	28	180	-1
41	23.65	6.3	98150	29	29	180	-1
42	23.65	6.3	98860	30	30	180	-1
43	23.65	6.3	99540	31	31	180	-1
44	23.65	6.3	100150	32	32	180	-2
45	23.65	6.3	100850	33	33.2	180	-2
46	23.65	6.3	101390	34	34.3	180	-2
47	23.65	6.3	101860	35	35.2	180	-2
48	23.65	6.3	102470	36	36.3	180	-2
49	23.65	6.3	102930	37	37.3	180	-2
50	23.65	6.3	103380	38	38.2	180	-2

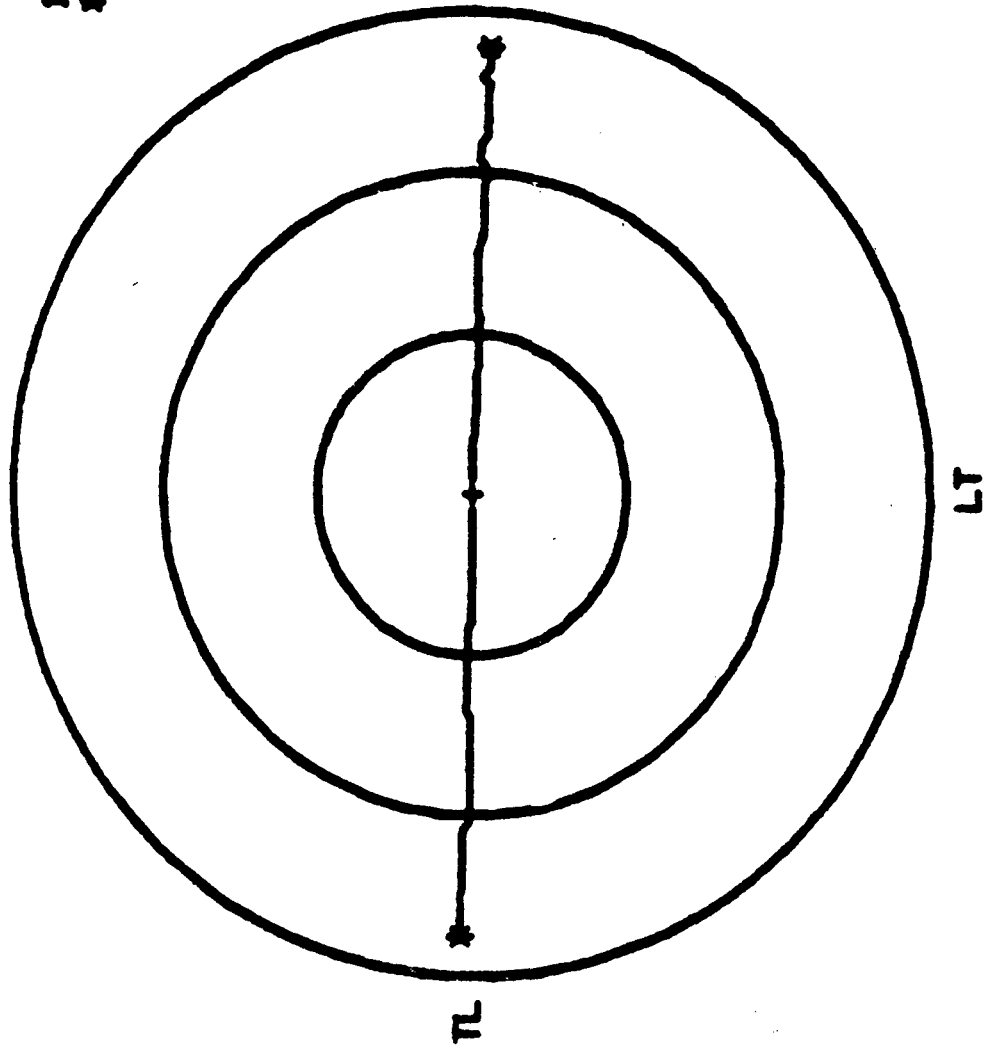
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	23.65	6.3	103850	39	39.3	180	-2
52	23.65	6.3	104200	40	40.5	180	-2
53	23.65	6.3	104730	41	41.7	180	-1
54	23.65	6.3	105090	42	42.7	179	-1
55	23.65	6.3	105480	43	43.6	179	-1
56	23.65	6.3	105820	44	44.5	179	-2
57	23.65	6.3	106200	45	45.5	179	-2
58	23.65	6.3	106530	46	46.5	179	-2
59	23.65	6.3	106870	47	47.4	179	-2
60	23.65	6.3	107210	48	48.6	179	-2
61	23.65	6.3	107580	49	49.9	179	-2
62	23.65	6.3	107920	50	51	179	-2
63	23.65	6.3	108200	51	52	179	-1
64	23.65	6.3	108510	52	53	179	-2
65	23.65	6.3	108770	53	53.8	179	-2
66	23.65	6.3	109120	54	54.8	179	-2
67	23.65	6.3	109390	55	55.5	179	-2



SPECIMEN 7-1

TEST CASE 8

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7

SPEC TL-7-1

CCT SPECIMEN TYPE TEST CASE 125

TEMP = 76 F

REL HUM = 42 %

4-29-77

W = 7 IN

B = .178 IN

R = .1

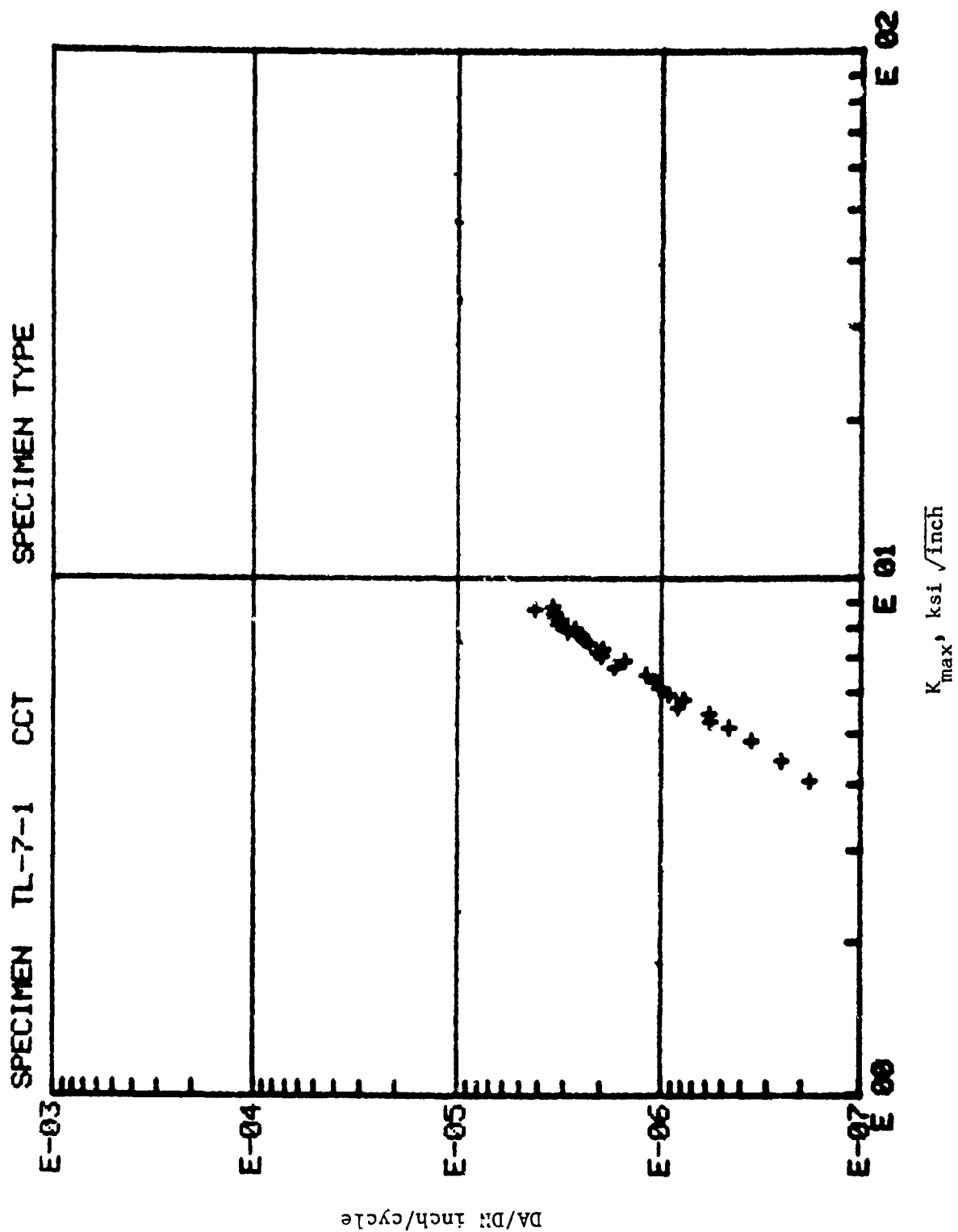
FREQUENCY = 25 HZ

LAB AIR ENVIRONMENT

GRID SPACING = .05 IN

FILE CODE: STL71  
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REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	6	0	4.2	3.8	4.4	4.9
2	6	203080	5	4.6	5.5	5.2
3	6	409250	6	5.6	6.6	6.3
4	6	549290	7.1	6.7	7.6	7.1
5	6	595200	7.5	7	8	7.7
6	6	636260	8	7.5	8.5	8.1
7	6	683250	8.5	8	9	8.8
8	6	713240	9.1	8.6	9.5	9.1
9	6	746920	9.5	9.2	10	9.7
10	6	769910	10	9.6	10.3	10.2
11	6	798920	10.5	10.2	11	10.8
12	6	819910	11	10.7	11.4	11.2
13	6	857890	11.9	11.6	12.3	12.1
14	6	876880	12.5	12.2	13	12.8
15	6	894870	13.1	12.8	13.5	13.3
16	6	908860	13.7	13.3	14	13.9
17	6	913080	13.9	13.5	14.2	14
18	6	938420	14.5	14.2	14.9	14.7
19	6	942420	15.1	14.7	15.4	15.3
20	6	951850	15.5	15.2	15.9	15.7
21	6	960390	16	15.6	16.3	16.1
22	6	969500	16.5	16.1	16.8	16.7
23	6	978010	17	16.6	17.2	17.1
24	6	987720	17.6	17.2	17.8	17.8
25	6	994960	18	17.7	18.3	18.2
26	6	1.00268E+06	18.5	18.2	18.8	18.8
27	6	1.00899E+06	19	18.7	19.2	19.1
28	6	1.01529E+06	19.5	19.1	19.8	19.7
29	6	1.02187E+06	20	19.6	20.2	20.1





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CRACK GROWTH TEST OF 7075-T73

SPEC TL-7-3

CCT SPECIMEN TYPE

TEST CASE 131

TEMP = 74 F

REL HUM = 50 %

4-6-77

W = 7.01 IN

B = .171 IN

R = .1

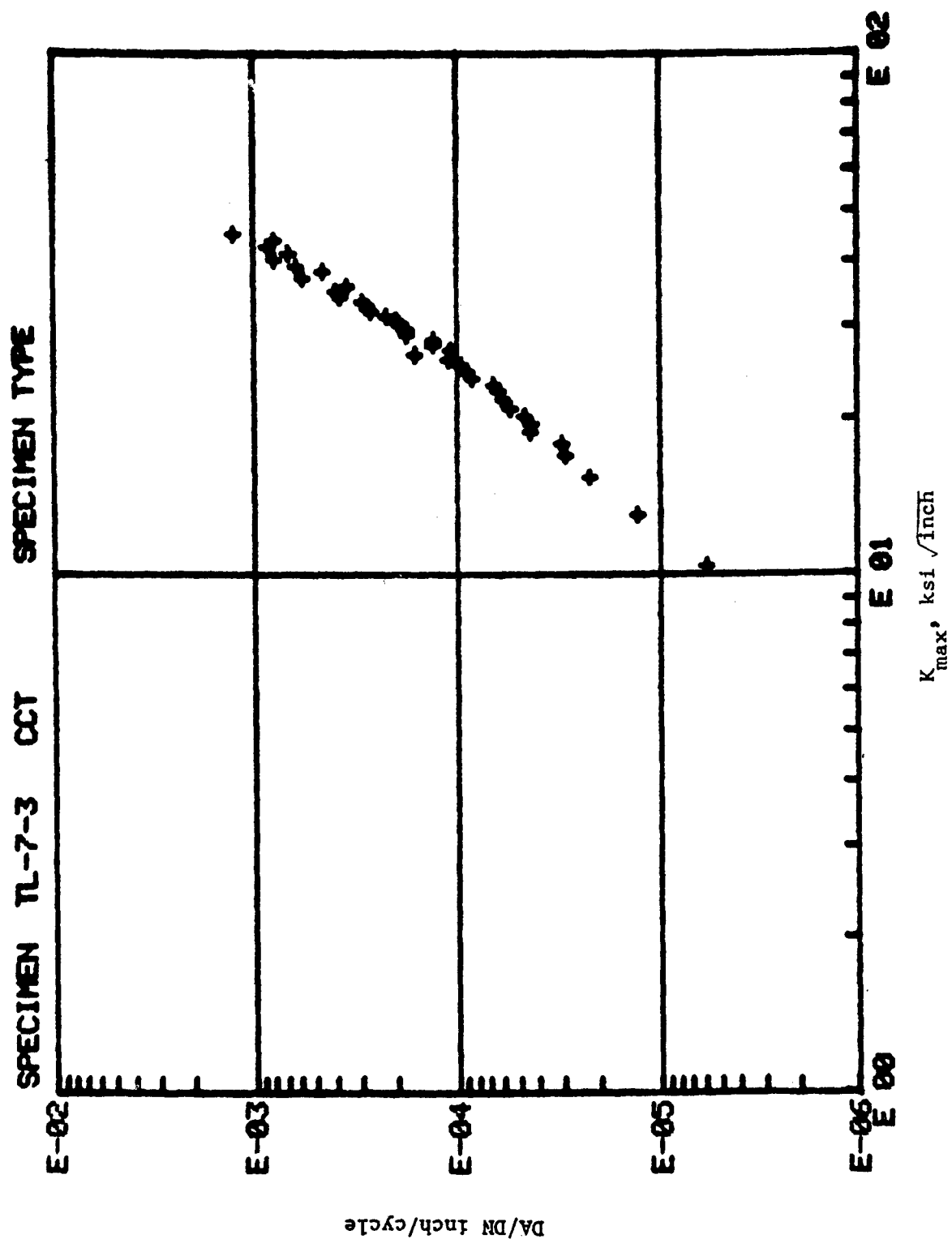
FREQUENCY = 5 HZ

LAB AIR ENVIRONMENT

GRID SPACING = .05 IN

FILE CODE: STL73  
-----

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	24	0	1	2	1.6	1.1
2	24	8270	2	3.1	2.4	2.1
3	24	12290	3	4.2	3.2	3.4
4	24	14690	4	5.3	4.6	4.2
5	24	15540	4.5	5.8	5.1	4.7
6	24	16360	5	6.4	5.6	5.1
7	24	16990	5.5	7	6.1	5.7
8	24	17370	5.9	7.3	6.4	6
9	24	17910	6.5	7.6	7	6.5
10	24	18320	7	8	7.4	7
11	24	18800	7.5	8.6	8	7.6
12	24	19180	8	9.2	8.4	8
13	24	19580	8.5	9.7	9	8.5
14	24	19860	9	10.1	9.5	9
15	24	20140	9.5	10.5	10	9.6
16	24	20400	10	10.9	10.6	10.1
17	24	20580	10.5	11.2	11.1	10.4
18	24	20720	11	11.7	11.5	10.8
19	24	20930	11.5	12	12	11.3
20	24	21110	12	12.3	12.5	11.9
21	24	21290	12.5	12.9	13	12.2
22	24	21460	13	13.7	13.6	12.7
23	24	21630	13.6	14.2	14.3	13.3
24	24	21740	14	14.7	14.7	13.7
25	24	21860	14.5	15.1	15.2	14.2
26	24	22000	15	15.8	15.8	14.9
27	24	22080	15.5	16.3	16.2	15.2
28	24	22180	16	16.9	16.7	15.8
29	24	22300	16.8	17.6	17.4	16.4
30	24	22400	17.5	18.3	18.2	17.2
31	24	22470	18	19	18.7	17.7
32	24	22610	19	19.9	19.7	18.7
33	24	22710	20	21	21	19.9
34	24	22790	21	21.6	21.6	20.6
35	24	22870	22	22.5	22.7	21.5
36	24	22930	23	23.5	23.6	22.4
37	24	23010	24	24.6	24.7	23.5
38	24	23080	25	26	25.8	24.8
39	24	23140	26	26.9	26.7	25.8
40	24	23180	27	27.9	27.5	27



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CRACK GROWTH TEST OF 7075-T7

SPEC TL-7-2

CCT SPECIMEN TYPE

TEST CASE 5

TEMP = 75 F

REL HUM = 50 %

5/18/77

W = 7.01 IN

B = .18 IN

R = .1

FREQUENCY = 10 HZ

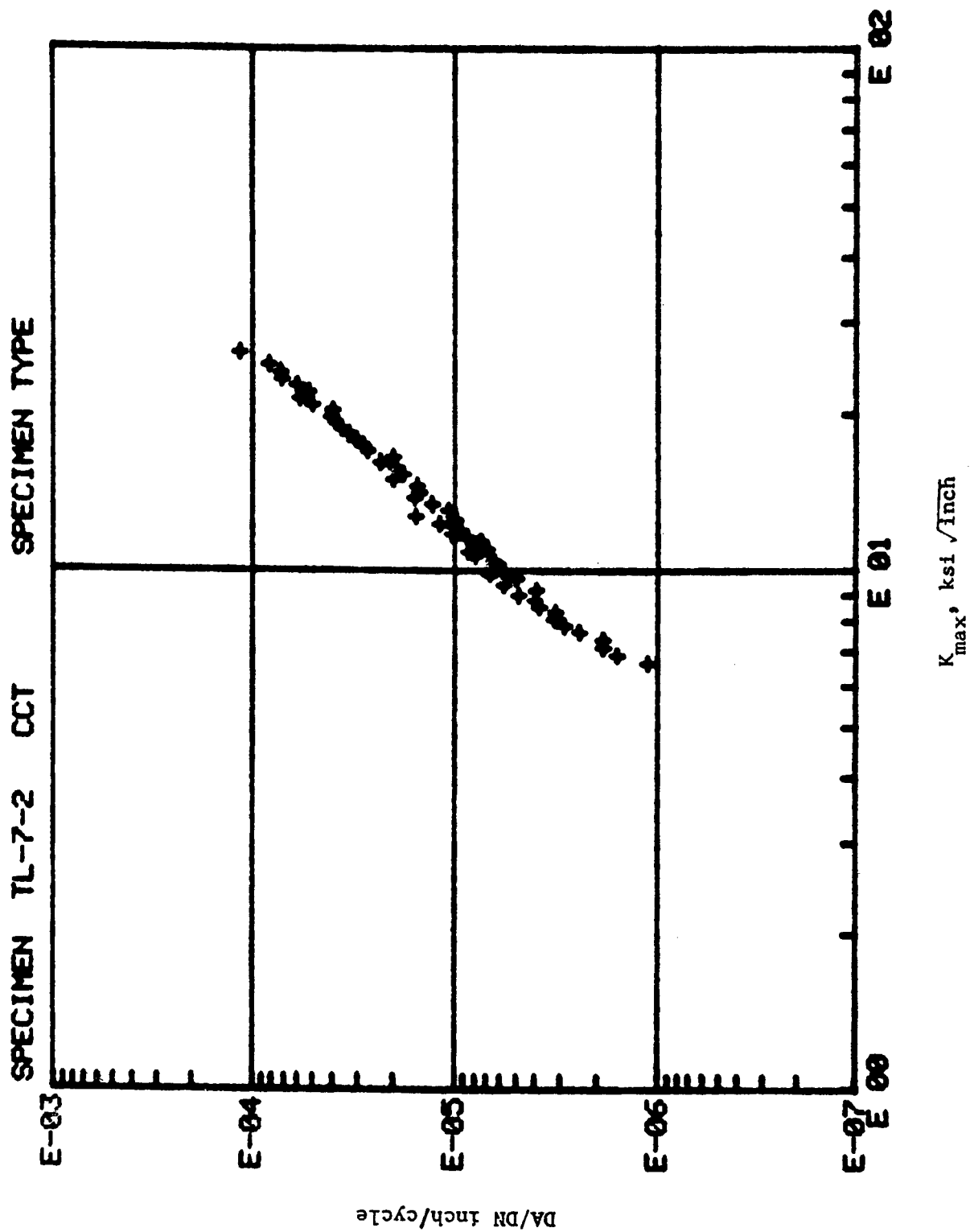
LAB AIR ENVIRONMENT

GRID SPACING = .05 IN

FILE CODE: \$TL72  
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REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2
1	8.5	8	6	6.2
2	8.5	22260	6.5	6.7
3	8.5	34830	7	7
4	8.5	48350	7.5	7.5
5	8.5	61880	8	8
6	8.5	72090	8.5	8.5
7	8.5	80740	9	9
8	8.5	88410	9.5	9.5
9	8.5	95480	10	9.9
10	8.5	102010	10.5	10.4
11	8.5	108870	11	11
12	8.5	114050	11.5	11.5
13	8.5	120350	12	12
14	8.5	124710	12.5	12.5
15	8.5	130750	13.1	13.1
16	8.5	133720	13.5	13.5
17	8.5	138110	14	14
18	8.5	142080	14.5	14.5
19	8.5	146390	15	15.1
20	8.5	149530	15.5	15.6
21	8.5	152440	16	16.1
22	8.5	155710	16.5	16.5
23	8.5	158950	17	17
24	8.5	162340	17.5	17.5
25	8.5	165220	18	18
26	8.5	167640	18.5	18.5
27	8.5	170260	19	19
28	8.5	172510	19.5	19.4
29	8.5	174610	20	19.9
30	8.5	177410	20.5	20.5
31	8.5	179020	21	21
32	8.5	183680	22	22
33	8.5	187530	23	23
34	8.5	190680	24	24
35	8.5	194040	25	25
36	8.5	197300	26	26
37	8.5	199790	27	27
38	8.5	202440	28	27.9
39	8.5	204980	29	28.9
40	8.5	207020	30	29.8
41	8.5	209520	31	30.8
42	8.5	211380	32	31.8
43	8.5	213050	33	32.7
44	8.5	214700	34	33.7
45	8.5	216200	35	34.7
46	8.5	217590	36	35.7
47	8.5	218940	37	36.8
48	8.5	220120	38	37.7
49	8.5	221370	39	38.7
50	8.5	222420	40	39.8

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2
51	8.5	223370	41	41
52	8.5	224330	42	42
53	8.5	225170	43	43
54	8.5	225840	44	43.9
55	8.5	226570	45	45
56	8.5	227500	47	46.1
57	8.5	228260	49	47.6



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 13 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-104 FLAW TYPE - 2

TEMP = 72 F REL HUM = 43 % 7-27-77

B = .172 IN R(L) = .1 R(T) = 1

FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 0  
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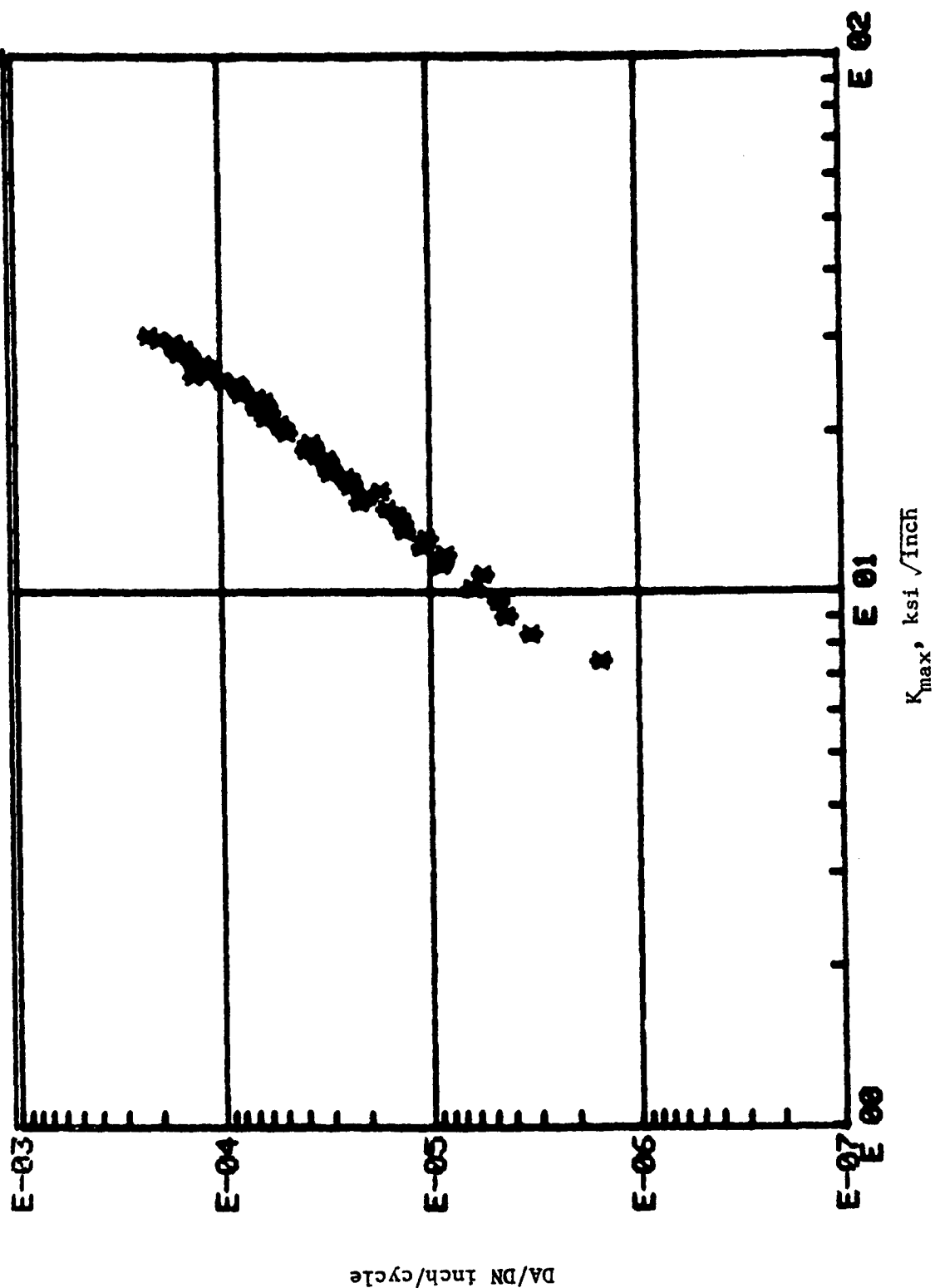


REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	6.3	23.6	0	2.4	1.8	270	90
2	6.3	23.6	24830	3	2.7	270	90
3	6.3	23.6	32460	3.5	3.2	270	90
4	6.3	23.6	38880	4	3.8	270	90
5	6.3	23.6	43700	4.5	4.2	270	90
6	6.3	23.6	48080	5	4.8	270	90
7	6.3	23.6	52560	5.5	5.3	270	90
8	6.3	23.6	55700	6	5.9	270	90
9	6.3	23.6	58360	6.5	6.3	270	90
10	6.3	23.6	60670	7	6.8	270	90
11	6.3	23.6	63110	7.5	7.3	270	90
12	6.3	23.6	65000	8	7.8	270	90
13	6.3	23.6	66840	8.5	8.3	270	90
14	6.3	23.6	68410	9	8.7	270	90
15	6.3	23.6	70280	9.5	9.4	270	90
16	6.3	23.6	71660	10.1	10	270	90
17	6.3	23.6	72670	10.5	10.4	270	90
18	6.3	23.6	73840	11	10.7	270	90
19	6.3	23.6	74990	11.5	11.3	270	90
20	6.3	23.6	75950	12	11.7	270	90
21	6.3	23.6	76940	12.5	12.2	269	90
22	6.3	23.6	77770	13	12.7	269	90
23	6.3	23.6	78610	13.5	13.2	269	90
24	6.3	23.6	79260	14	13.5	269	90
25	6.3	23.6	80060	14.5	14	269	90
26	6.3	23.6	80710	15	14.4	269	90
27	6.3	23.6	82000	16	15.4	269	90
28	6.3	23.6	83440	17.1	16.4	269	90
29	6.3	23.6	85410	19	18.3	269	90
30	6.3	23.6	86230	20	19	269	90
31	6.3	23.6	87100	21	20.1	269	90
32	6.3	23.6	87920	22	21	268	90
33	6.3	23.6	88670	23	22	268	91
34	6.3	23.6	89400	24	22.8	268	91
35	6.3	23.6	90040	25	23.5	268	91
36	6.3	23.6	90640	26	24.4	268	91
37	6.3	23.6	91330	27	25.6	268	91
38	6.3	23.6	91900	28	26.5	268	91
39	6.3	23.6	92390	29	27.4	268	91
40	6.3	23.6	92840	30	28.8	268	91
41	6.3	23.6	93260	31.1	29.6	268	91
42	6.3	23.6	93650	32	30.5	268	91
43	6.3	23.6	94150	33.1	31.8	268	91
44	6.3	23.6	94560	34.1	33	268	91
45	6.3	23.6	94900	35	34	268	91
46	6.3	23.6	95220	36	35	268	91
47	6.3	23.6	95610	37	36.3	269	91
48	6.3	23.6	95940	38	37.5	269	91
49	6.3	23.6	96260	39	38.6	269	91
50	6.3	23.6	96530	40	39.7	269	91

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	6.3	23.6	96780	41.1	40.8	269	91

# TEST CASE 13

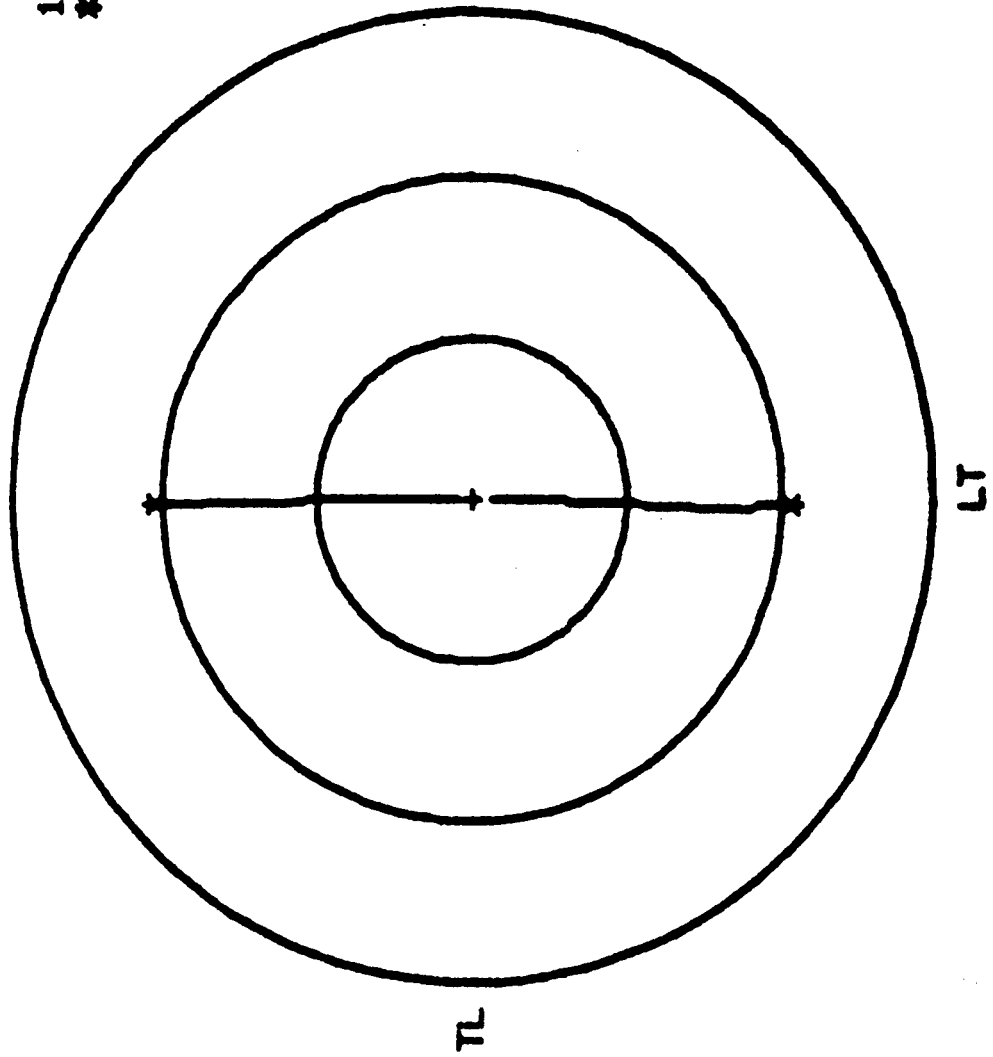
SPECIMEN 7-104



SPECIMEN 7-104

TEST CASE 13

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 60 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-40 FLAW TYPE - 1

TEMP = 77 F

REL HUM = 65 %

6-5-78

B = .175 IN

R(L) = .1

R(T) = .1

FREQ = 5 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

BIAXIAL RATIO = -1  
-----

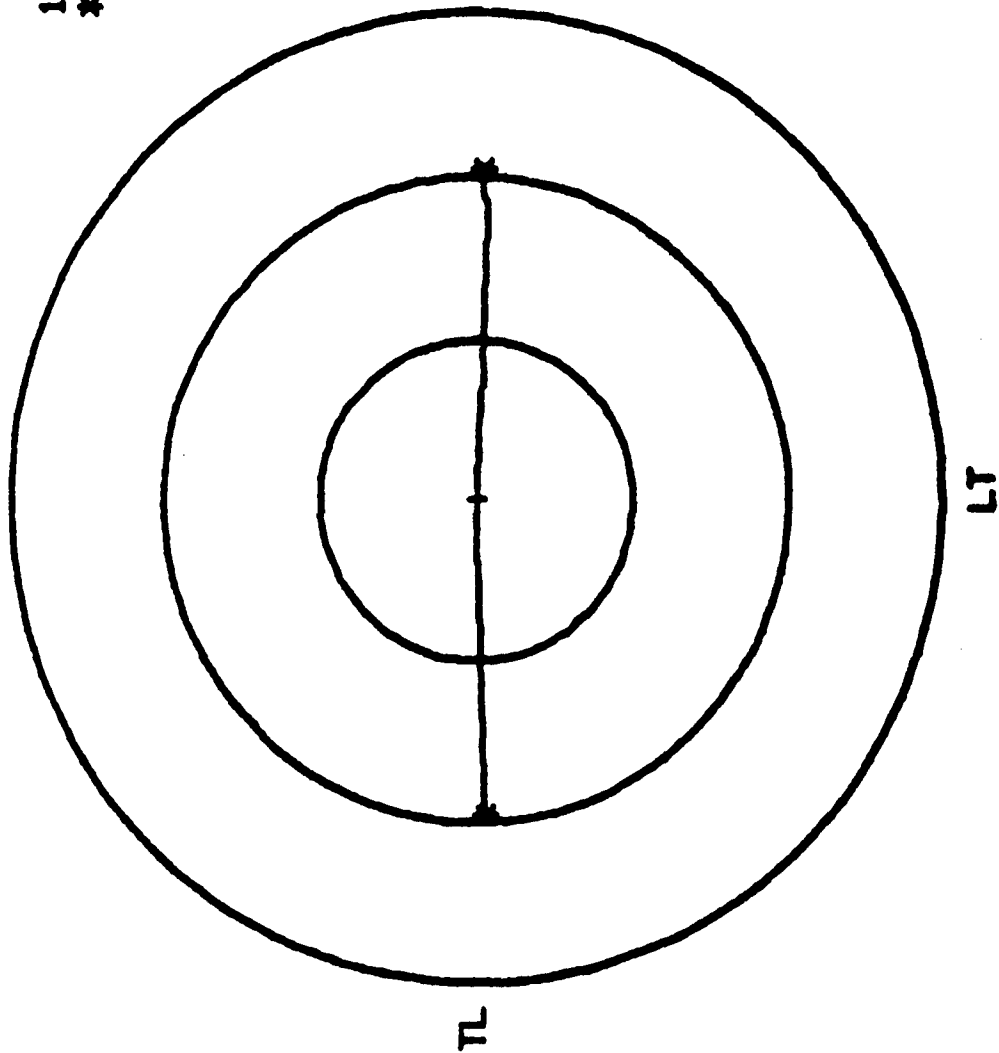
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	21.7	-21.7	0	1.5	1.5	182	0
2	21.7	-21.7	14170	2	1.9	182	0
3	21.7	-21.7	25500	2.2	2.1	182	0
4	21.7	-21.7	32240	2.5	2.5	182	0
5	21.7	-21.7	43250	3.2	3.2	181	0
6	21.7	-21.7	46130	3.5	3.5	181	0
7	21.7	-21.7	51290	4	4	180	0
8	21.7	-21.7	55120	4.4	4.6	180	-2
9	21.7	-21.7	57710	5	5	181	-2
10	21.7	-21.7	61530	5.6	5.6	181	-2
11	21.7	-21.7	63270	6	5.9	181	-2
12	21.7	-21.7	65950	6.5	6.3	181	-2
13	21.7	-21.7	67990	7	7	181	-2
14	21.7	-21.7	69860	7.5	7.4	181	-2
15	21.7	-21.7	71500	8	7.9	182	-2
16	21.7	-21.7	74080	8.9	8.7	182	-2
17	21.7	-21.7	79120	10.5	10.6	182	-2
18	21.7	-21.7	80280	11	11.1	182	-2
19	21.7	-21.7	81350	11.5	11.6	182	-2
20	21.7	-21.7	82560	12	12	182	-2
21	21.7	-21.7	83570	12.5	12.5	182	-2
22	21.7	-21.7	84310	13	12.9	182	-2
23	21.7	-21.7	85150	13.5	13.2	182	-2
24	21.7	-21.7	85970	14	13.8	182	-2
25	21.7	-21.7	87020	14.5	14.4	182	-3
26	21.7	-21.7	87640	15	15	182	-3
27	21.7	-21.7	89060	16	15.9	182	-3
28	21.7	-21.7	90300	17	16.9	182	-3
29	21.7	-21.7	91730	18	18	182	-2
30	21.7	-21.7	92920	19	18.9	182	-2
31	21.7	-21.7	93910	20	20	182	-3
32	21.7	-21.7	94810	21	21	182	-2
33	21.7	-21.7	95710	22	22	182	-2
34	21.7	-21.7	96410	23	23	182	-2
35	21.7	-21.7	97140	24	24	182	-2
36	21.7	-21.7	97920	25	25.1	182	-2
37	21.7	-21.7	98580	26	26.3	182	-2
38	21.7	-21.7	99190	27	27.5	182	-2
39	21.7	-21.7	99880	28	28.9	182	-2
40	21.7	-21.7	100500	29	30	182	-2
41	21.7	-21.7	101120	30	31	182	-2
42	21.7	-21.7	101620	31	32	182	-2
43	21.7	-21.7	102040	32	32.8	182	-2
44	21.7	-21.7	102500	33	33.8	182	-2
45	21.7	-21.7	102920	34	34.9	182	-2
46	21.7	-21.7	103350	35	35.9	182	-2
47	21.7	-21.7	103740	36	36.7	182	-2
48	21.7	-21.7	104280	37	38	182	-1
49	21.7	-21.7	104760	38	39.5	182	-1
50	21.7	-21.7	105240	39	40.9	182	-1



SPECIMEN 2-40

TEST CASE 60

1 IN SPACING  
\* TEST STOPPED





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CRACK GROWTH TEST OF 2024-T3 TEST CASE 33 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-44 FLAW TYPE - 1

TEMP = 74 F REL HUM = 62 % 5-31-78

B = .18 IN R(L) = .1 R(T) = .1

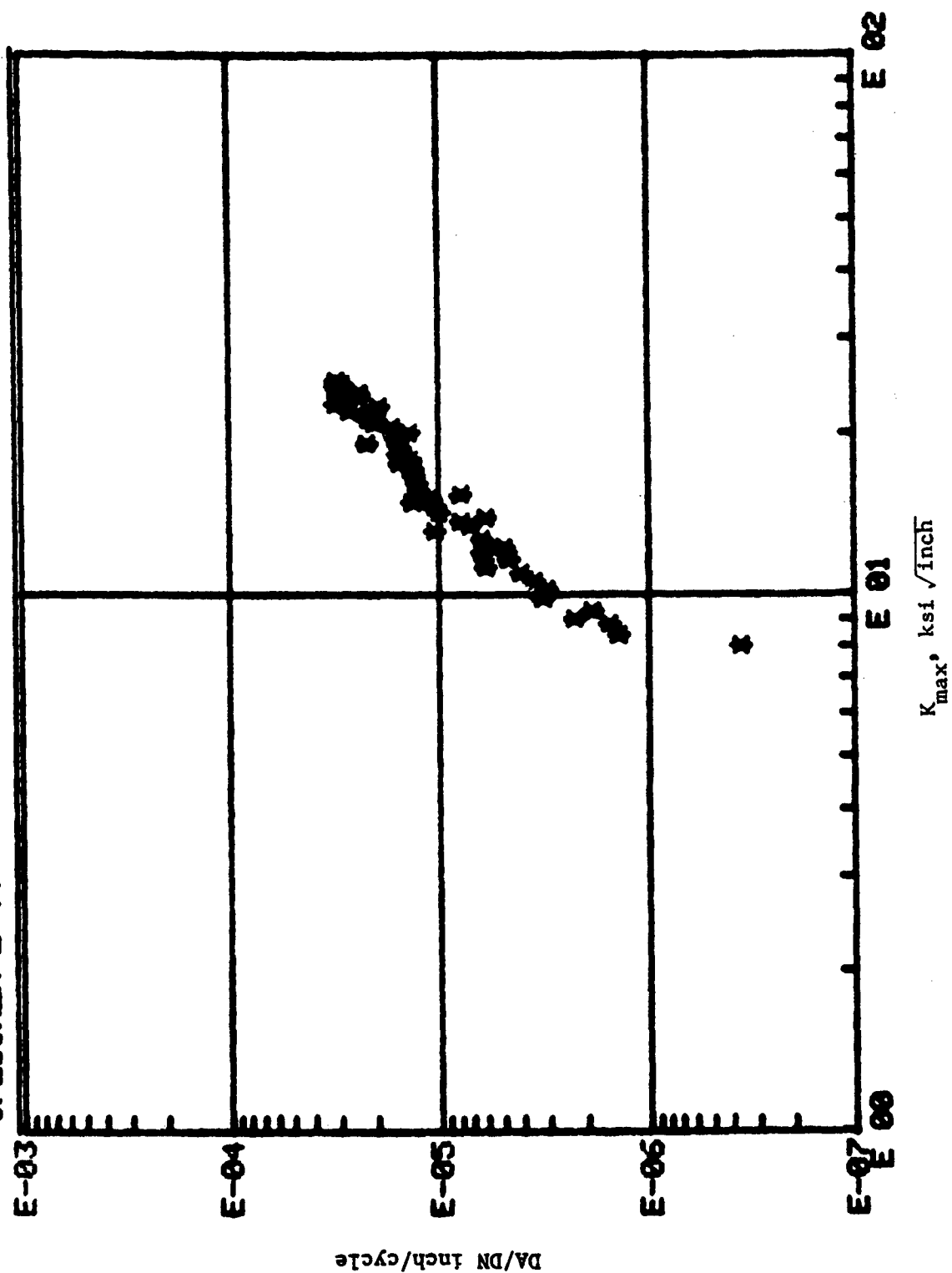
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = -1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	14.48	-14.48	0	3.8	4.3	182	0
2	14.48	-14.48	27600	4	4.5	182	0
3	14.48	-14.48	47380	4.5	5.1	181	0
4	14.48	-14.48	57110	4.8	5.4	181	0
5	14.48	-14.48	62620	5	5.7	181	0
6	14.48	-14.48	76160	5.5	6.2	181	0
7	14.48	-14.48	86390	6	7	182	1
8	14.48	-14.48	92940	6.5	7.3	181	1
9	14.48	-14.48	100690	7	7.9	181	1
10	14.48	-14.48	106820	7.5	8.4	181	1
11	14.48	-14.48	111000	8	8.9	181	1
12	14.48	-14.48	116390	8.5	9.4	181	1
13	14.48	-14.48	120820	9	10	181	1
14	14.48	-14.48	125420	9.5	10.4	181	1
15	14.48	-14.48	132660	10.5	11.2	181	1
16	14.48	-14.48	135850	11	11.7	181	1
17	14.48	-14.48	139250	11.6	12.3	180	0
18	14.48	-14.48	141490	12	12.6	180	0
19	14.48	-14.48	145660	12.5	13.1	180	0
20	14.48	-14.48	148920	13.1	13.8	180	0
21	14.48	-14.48	151090	13.6	14.2	180	-1
22	14.48	-14.48	152790	14	14.7	181	-1
23	14.48	-14.48	155270	14.6	15.2	181	-1
24	14.48	-14.48	158150	15	15.7	181	-1
25	14.48	-14.48	161770	16	16.5	181	-1
26	14.48	-14.48	165880	17	17.6	181	-1
27	14.48	-14.48	169700	18	18.6	181	-1
28	14.48	-14.48	173480	19	19.6	181	-2
29	14.48	-14.48	175930	19.7	20.4	181	-2
30	14.48	-14.48	179380	21	21	181	-2
31	14.48	-14.48	182760	22	22.1	181	-2
32	14.48	-14.48	186860	23	23.1	181	-2
33	14.48	-14.48	188230	24	24	182	-2
34	14.48	-14.48	191960	25	25.4	181	-3
35	14.48	-14.48	196260	26	26.8	181	-3
36	14.48	-14.48	199260	27	27.8	180	-3
37	14.48	-14.48	201740	28	28.8	180	-2
38	14.48	-14.48	204050	29	29.8	180	-2
39	14.48	-14.48	206520	30	30.9	180	-1
40	14.48	-14.48	208320	31	31.8	179	-1
41	14.48	-14.48	211030	32.1	32.8	179	-1
42	14.48	-14.48	212730	33	34	179	0
43	14.48	-14.48	214460	34	35	179	0
44	14.48	-14.48	216530	35	36	178	0
45	14.48	-14.48	218720	36	37.1	178	0
46	14.48	-14.48	220430	37	38.1	178	0
47	14.48	-14.48	222040	38	39.1	178	1
48	14.48	-14.48	223860	39	40.2	178	1
49	14.48	-14.48	225340	40	41	178	1

**TEST CASE 33**

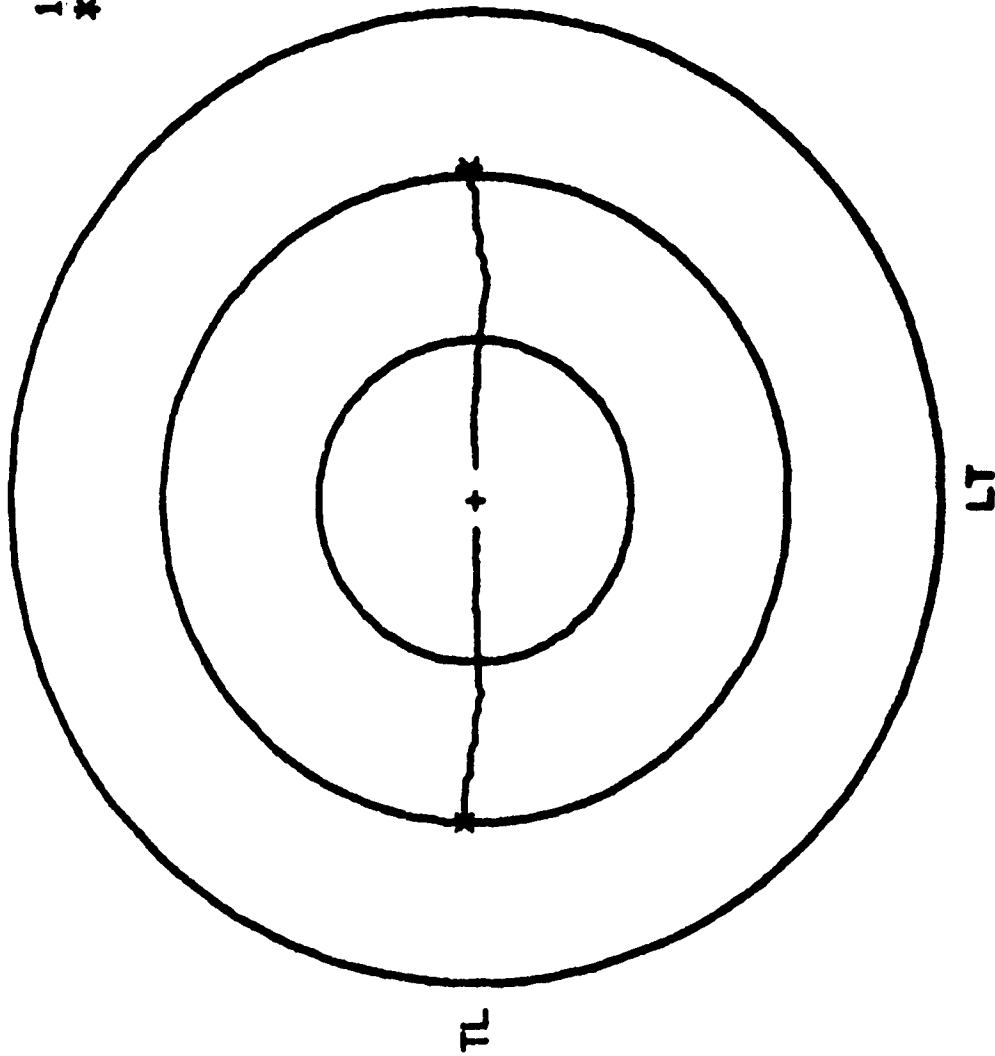
**SPECIMEN 2-44**



SPECIMEN 2-44

TEST CASE 33

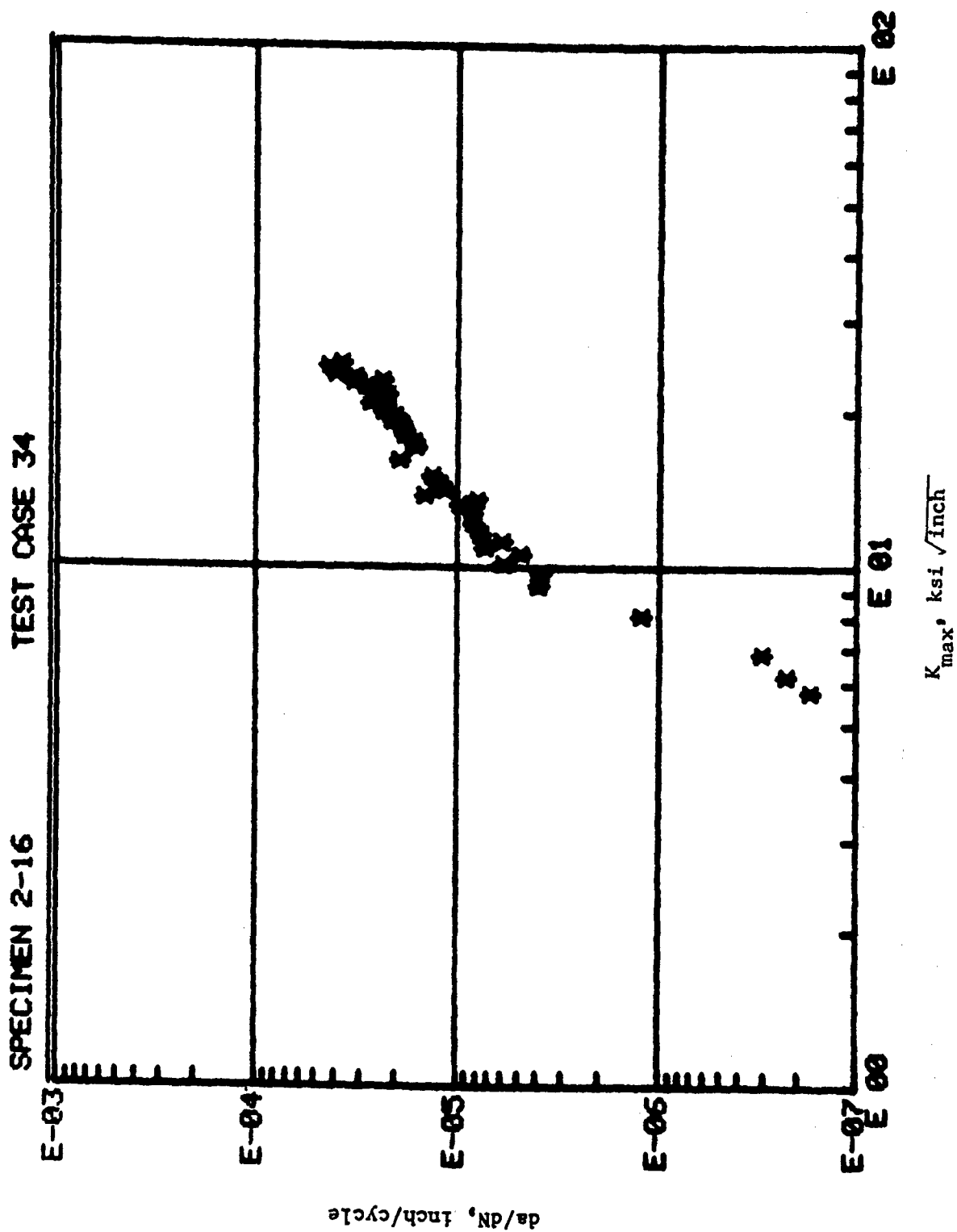
1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 34 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-16 FLAW TYPE - I  
TEMP = 70 F REL HUM = 40 % 09/08/77  
B = .178 IN R(L) = .1 R(R) = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	14.48	-14.48	0	2.2	1.9	180	0
2	14.48	-14.48	57650	2.5	2	180	0
3	14.48	-14.48	144880	3	2.3	180	0
4	14.48	-14.48	259690	3.5	3.2	180	0
5	14.48	-14.48	326800	5	5	180	0
6	14.48	-14.48	338870	6	5.9	180	0
7	14.48	-14.48	344090	6.5	6.2	179	0
8	14.48	-14.48	349160	7	6.9	178	0
9	14.48	-14.48	353810	7.5	7.3	178	0
10	14.48	-14.48	357220	8	7.6	178	0
11	14.48	-14.48	361800	8.5	8.4	178	0
12	14.48	-14.48	364770	9	8.8	178	0
13	14.48	-14.48	371360	10	10	177	-1
14	14.48	-14.48	377290	11	11	177	-1
15	14.48	-14.48	379870	11.5	11.5	177	-1
16	14.48	-14.48	383020	12	12	177	-1
17	14.48	-14.48	384740	12.5	12.5	177	-1
18	14.48	-14.48	386900	13	13	177	-1
19	14.48	-14.48	390970	14	14	177	-1
20	14.48	-14.48	394750	15	15	178	-1
21	14.48	-14.48	402950	18	18.3	180	-2
22	14.48	-14.48	406080	19	19.3	180	-2
23	14.48	-14.48	409120	20	20.3	180	-2
24	14.48	-14.48	412020	21	21.4	181	-2
25	14.48	-14.48	414600	22	22.3	181	-2
26	14.48	-14.48	417220	23	23.3	180	-2
27	14.48	-14.48	419600	24	24.3	181	-2
28	14.48	-14.48	421930	25	25.2	181	-3
29	14.48	-14.48	424200	26	26.3	181	-3
30	14.48	-14.48	426500	27	27.4	181	-3
31	14.48	-14.48	428380	28	28.4	181	-3
32	14.48	-14.48	430150	29	29.2	181	-3
33	14.48	-14.48	432160	30	30	181	-3
34	14.48	-14.48	434200	31	31	181	-3
35	14.48	-14.48	436150	32	32.2	181	-3
36	14.48	-14.48	437850	33	33.4	181	-3
37	14.48	-14.48	439800	34	34.3	181	-3
38	14.48	-14.48	441430	35	35.3	181	-3
39	14.48	-14.48	442870	36	36.6	181	-3
40	14.48	-14.48	444360	37	37.9	181	-3
41	14.48	-14.48	445530	38	38.9	181	-3
42	14.48	-14.48	446940	39	40	182	-3

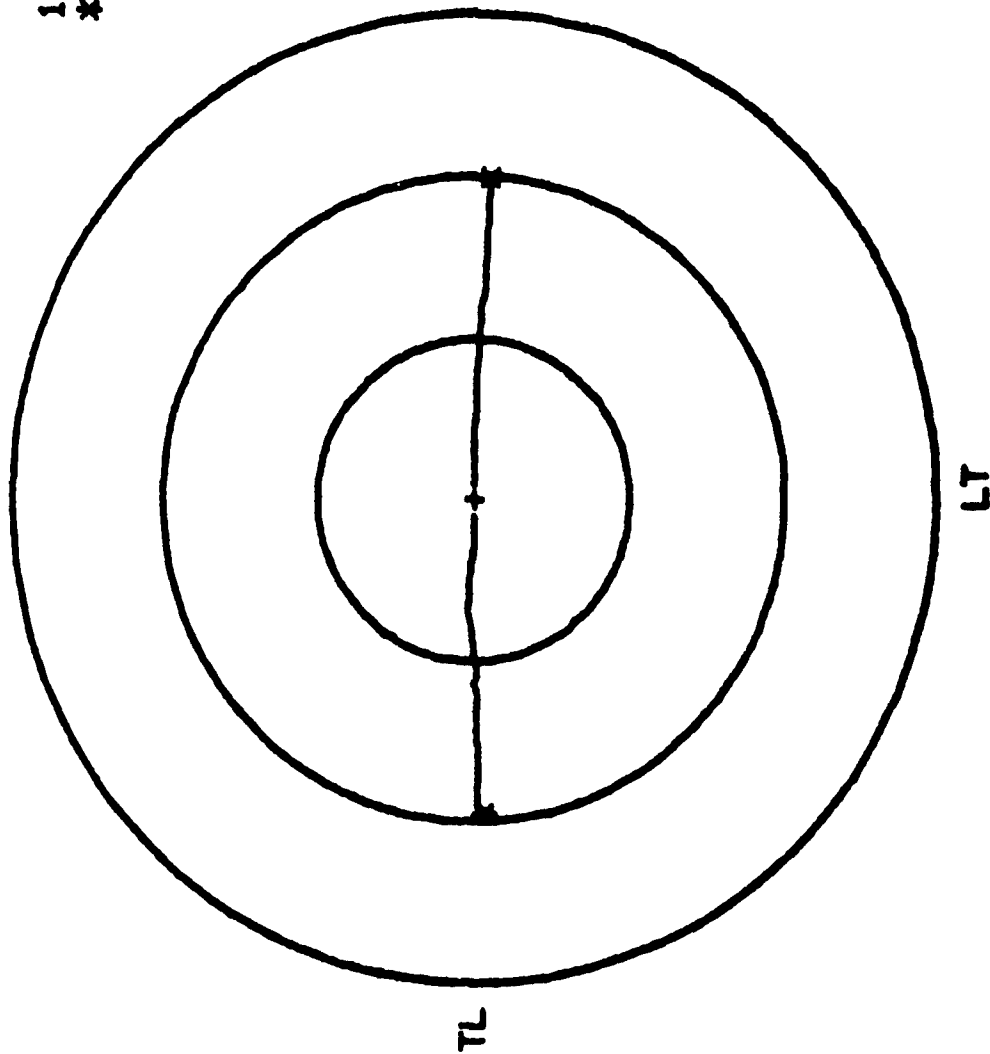
# SPECIMEN 2-16 TEST CASE 34



SPECIMEN 2-16

TEST CASE 34

1 IN SPACING  
\* TEST STOPPED





CRACK GROWTH TEST OF 2024-T3 TEST CASE 137 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-43 FLAW TYPE - 1

TEMP = 76 F

REL HUM = 44 %

12/12/77

B = .171 IN

R(L) = .1

R(T) = .1

FREQ = 2 HZ

PHASE ANGLE = 0

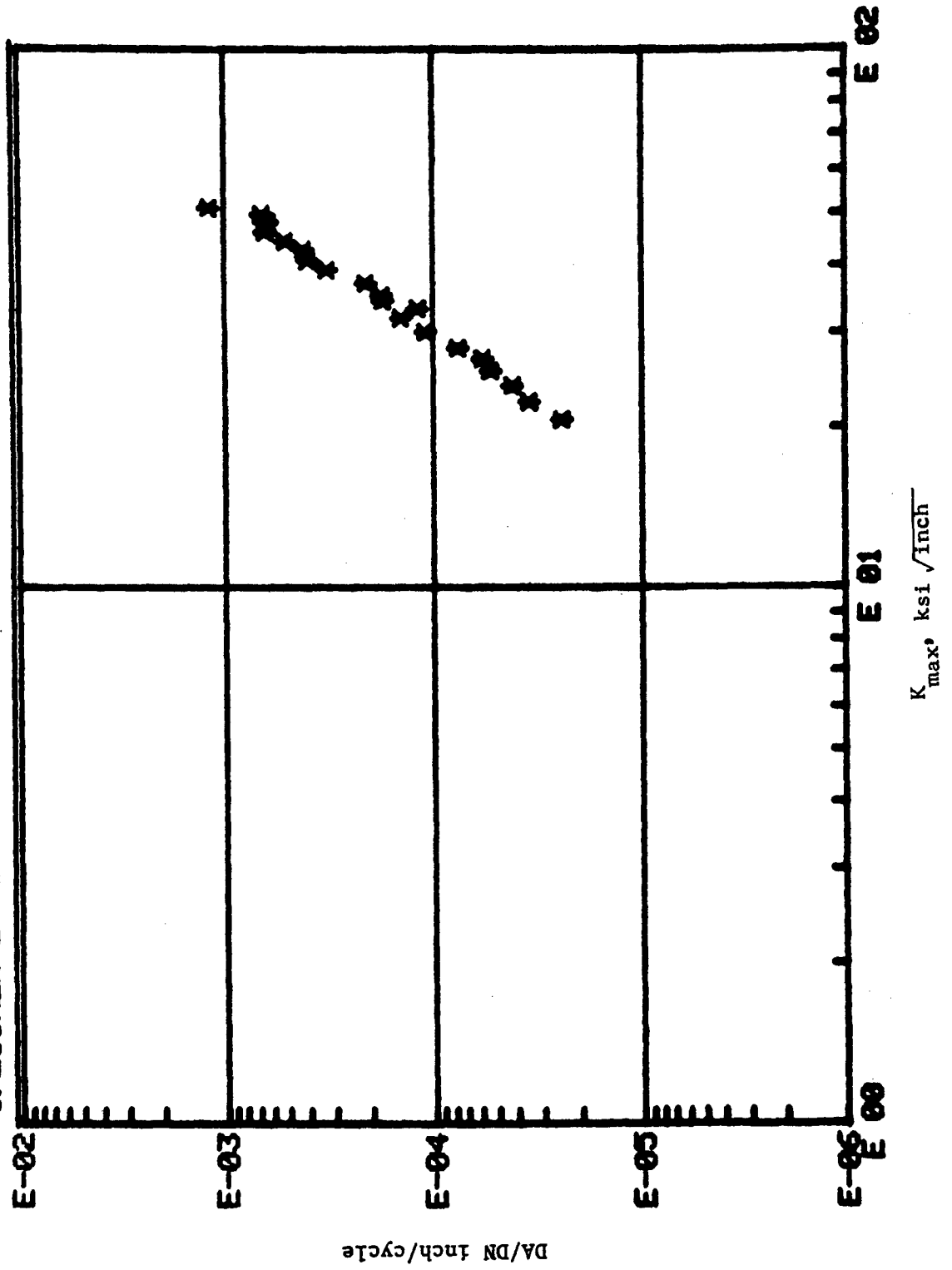
GRID SPACING = .05 IN

BIAXIAL RATIO = -.5

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	51.24	-13.72	0	3.1	2.7	187	10
2	51.24	-13.72	621	3.5	2.9	187	10
3	51.24	-13.72	1560	4	3.7	188	11
4	51.24	-13.72	2039	4.5	4	189	11
5	51.24	-13.72	2650	5	4.8	190	11
6	51.24	-13.72	2994	5.5	5.1	190	12
7	51.24	-13.72	3389	6	5.8	191	12
8	51.24	-13.72	3846	7	6.8	190	12
9	51.24	-13.72	4075	7.5	7.6	190	12
10	51.24	-13.72	4287	8	8.1	191	11
11	51.24	-13.72	4444	8.5	8.7	191	9
12	51.24	-13.72	4557	9	9	191	8
13	51.24	-13.72	4878	10	10.7	191	6
14	51.24	-13.72	5032	11	11.7	192	5
15	51.24	-13.72	5151	12	12.6	193	5
16	51.24	-13.72	5289	13	13.9	194	4
17	51.24	-13.72	5387	14	14.9	194	4
18	51.24	-13.72	5470	15	16	195	3
19	51.24	-13.72	5592	16	18	195	4
20	51.24	-13.72	5675	17	19.2	196	3
21	51.24	-13.72	5717	18	20.2	197	3

TEST CASE 137

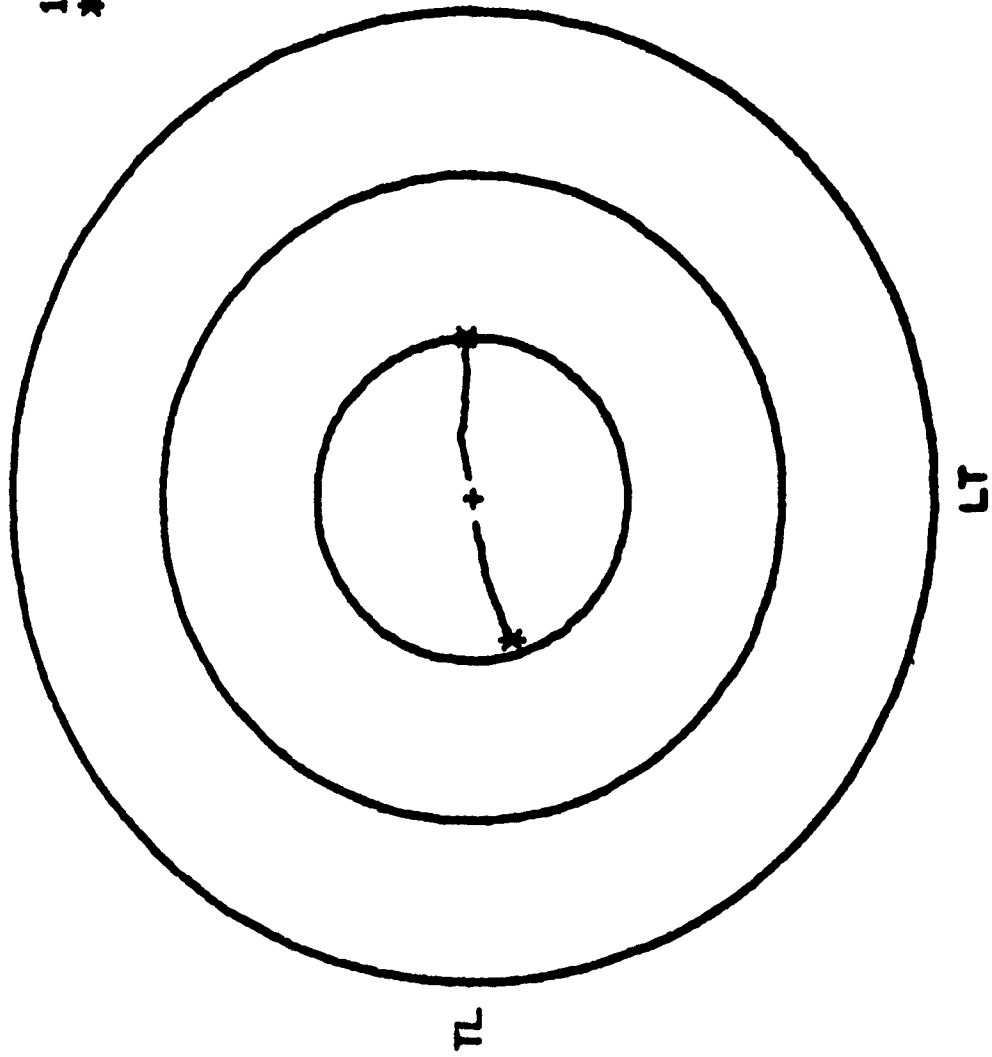
SPECIMEN 2-45



SPECIMEN 2-45

TEST CASE 137

1 IN SPACING  
\* TEST STOPPED

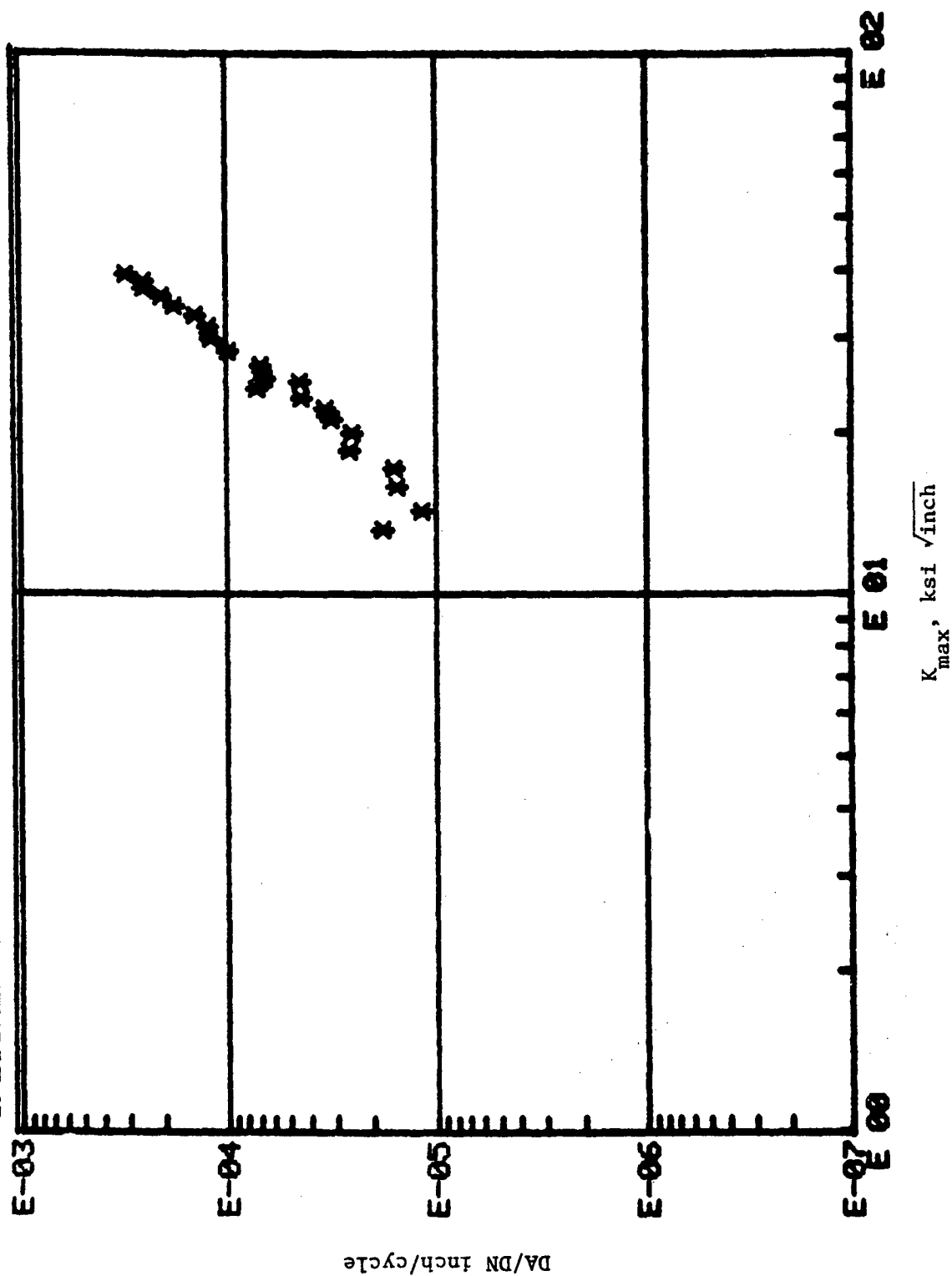


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CRACK GROWTH TEST OF 2024-T3 TEST CASE 66 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-28 FLAW TYPE - 1  
TEMP = 77 F REL HUM = 65 % 6-8-78  
B = .173 IN R(L) = .1 R(T) = .1  
FREQ = 2 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	42.8	-11.4	0	1.7	1.6	194	2
2	42.8	-11.4	700	2	1.8	194	3
3	42.8	-11.4	2410	2.5	2.1	193	3
4	42.8	-11.4	4210	3	2.7	193	3
5	42.8	-11.4	5320	3.4	3	192	3
6	42.8	-11.4	6580	4	3.7	192	3
7	42.8	-11.4	7480	4.5	4.1	191	4
8	42.8	-11.4	8280	5	4.6	190	4
9	42.8	-11.4	8950	5.5	5	190	5
10	42.8	-11.4	9470	6	5.4	190	5
11	42.8	-11.4	9860	6.5	6	190	5
12	42.8	-11.4	10030	6.7	6.1	190	5
13	42.8	-11.4	10260	7	6.4	190	5
14	42.8	-11.4	11030	8	7.5	190	6
15	42.8	-11.4	11490	9	8.3	190	7
16	42.8	-11.4	11910	10	9.3	188	7
17	42.8	-11.4	12320	11	10.3	188	7
18	42.8	-11.4	12660	12	11.2	188	7
19	42.8	-11.4	12930	13	12.1	187	7
20	42.8	-11.4	13150	14	12.9	186	7
21	42.8	-11.4	13350	15	13.9	186	7
22	42.8	-11.4	13520	16	14.6	185	7
23	42.8	-11.4	13660	17	15.3	184	7

# TEST CASE 66

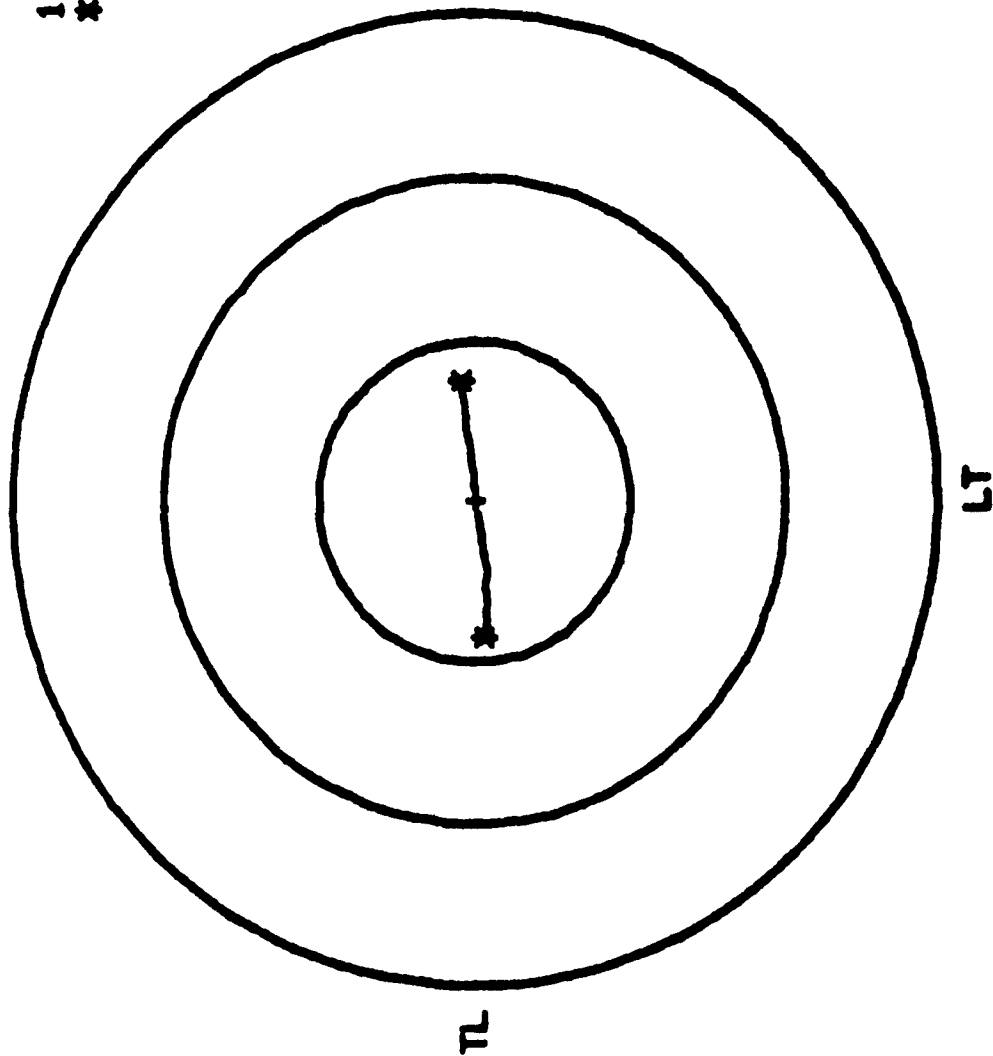
SPECIMEN 2-28



SPECIMEN 2-28

TEST CASE 66

1 IN SPACING  
\* TEST STOPPED

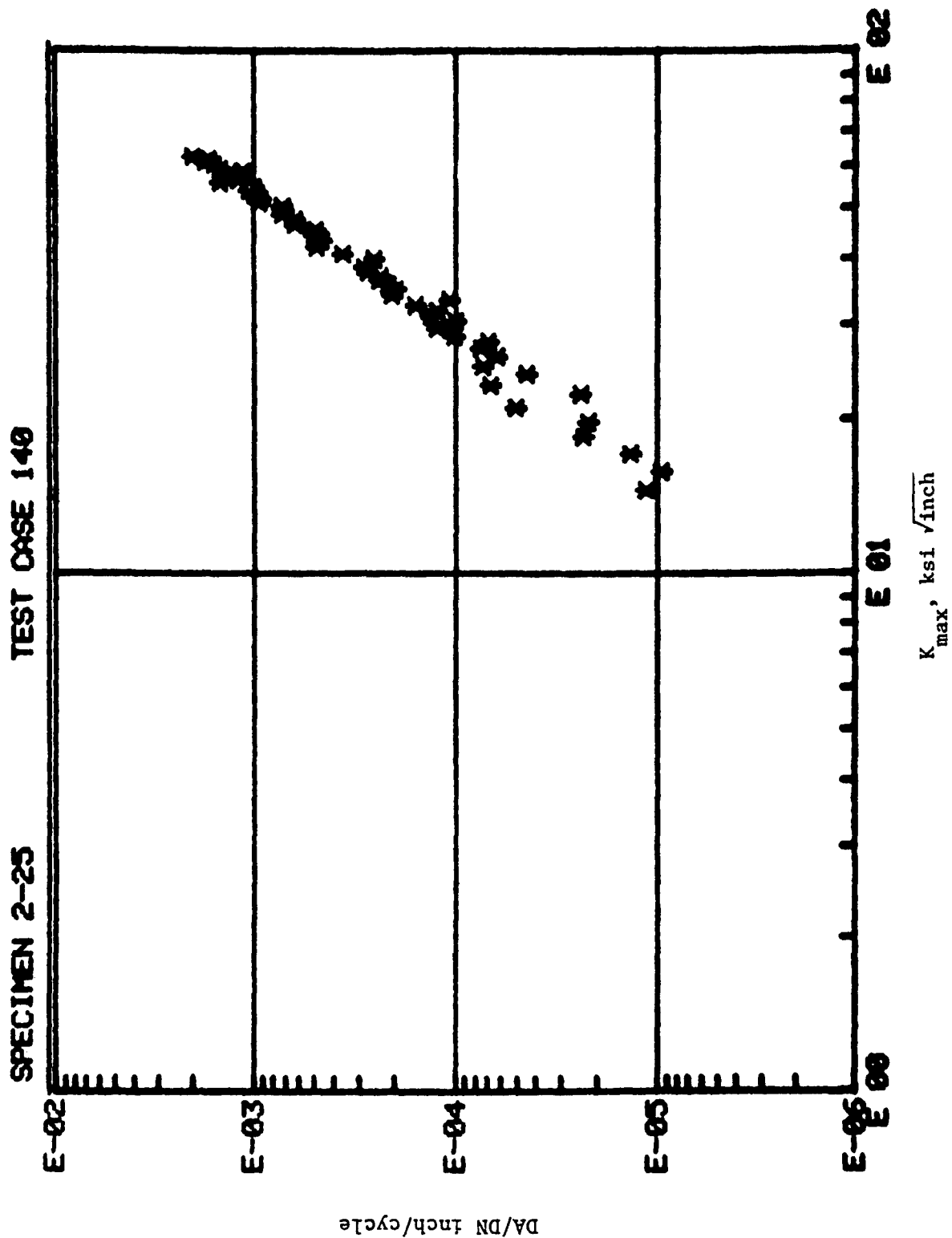




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CRACK GROWTH TEST OF 2024-T3 TEST CASE 140 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-25 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 53 % 01/17/78  
B = .169 IN R(L) = .1 R(T) = .1  
FREQ = 2 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	42.78	-11.44	0	2.1	2	180	14
2	42.78	-11.44	1321	2.5	2.2	180	13
3	42.78	-11.44	3657	3	2.6	181	12
4	42.78	-11.44	5326	3.5	3	182	11
5	42.78	-11.44	6401	4	3.5	184	10
6	42.78	-11.44	7530	4.5	4	184	10
7	42.78	-11.44	8076	5	4.6	185	10
8	42.78	-11.44	9114	5.5	5.1	185	10
9	42.78	-11.44	9449	6	5.5	186	10
10	42.78	-11.44	10010	6.5	6	186	10
11	42.78	-11.44	10320	7	6.4	186	9
12	42.78	-11.44	10759	7.5	7	186	9
13	42.78	-11.44	11094	8	7.5	187	9
14	42.78	-11.44	11421	8.5	7.9	187	9
15	42.78	-11.44	11594	9	8.1	187	9
16	42.78	-11.44	11858	9.5	8.9	187	9
17	42.78	-11.44	12058	10	9.2	187	8
18	42.78	-11.44	12284	10.5	9.9	187	8
19	42.78	-11.44	12426	11	10.1	187	7
20	42.78	-11.44	12631	11.5	10.9	186	7
21	42.78	-11.44	12817	12	11.2	186	7
22	42.78	-11.44	12975	12.5	12	186	7
23	42.78	-11.44	13088	13	12.4	186	6
24	42.78	-11.44	13215	13.5	13	186	6
25	42.78	-11.44	13309	14	13.4	186	6
26	42.78	-11.44	13425	14.5	14	185	6
27	42.78	-11.44	13508	15	14.4	185	5
28	42.78	-11.44	13693	16	15.5	185	5
29	42.78	-11.44	13851	17	16.1	185	5
30	42.78	-11.44	13983	18	17	184	5
31	42.78	-11.44	14085	19	18	184	4
32	42.78	-11.44	14194	20	19	184	4
33	42.78	-11.44	14289	21	19.9	183	4
34	42.78	-11.44	14390	22	20.9	183	4
35	42.78	-11.44	14478	23	21.9	183	4
36	42.78	-11.44	14550	24	22.9	183	3
37	42.78	-11.44	14616	25	23.8	183	3
38	42.78	-11.44	14676	26	24.5	183	3
39	42.78	-11.44	14739	27	25.3	183	3
40	42.78	-11.44	14795	28	26.4	183	3
41	42.78	-11.44	14841	29	27.1	182	3
42	42.78	-11.44	14891	30	28.1	182	2
43	42.78	-11.44	14936	31	29	182	2
44	42.78	-11.44	14986	32	30	182	2
45	42.78	-11.44	15020	33	31	182	2
46	42.78	-11.44	15060	34	31.9	182	2
47	42.78	-11.44	15095	35	32.9	182	2
48	42.78	-11.44	15131	36	33.8	182	2
49	42.78	-11.44	15162	37	34.2	182	2
50	42.78	-11.44	15196	38	35.2	182	2

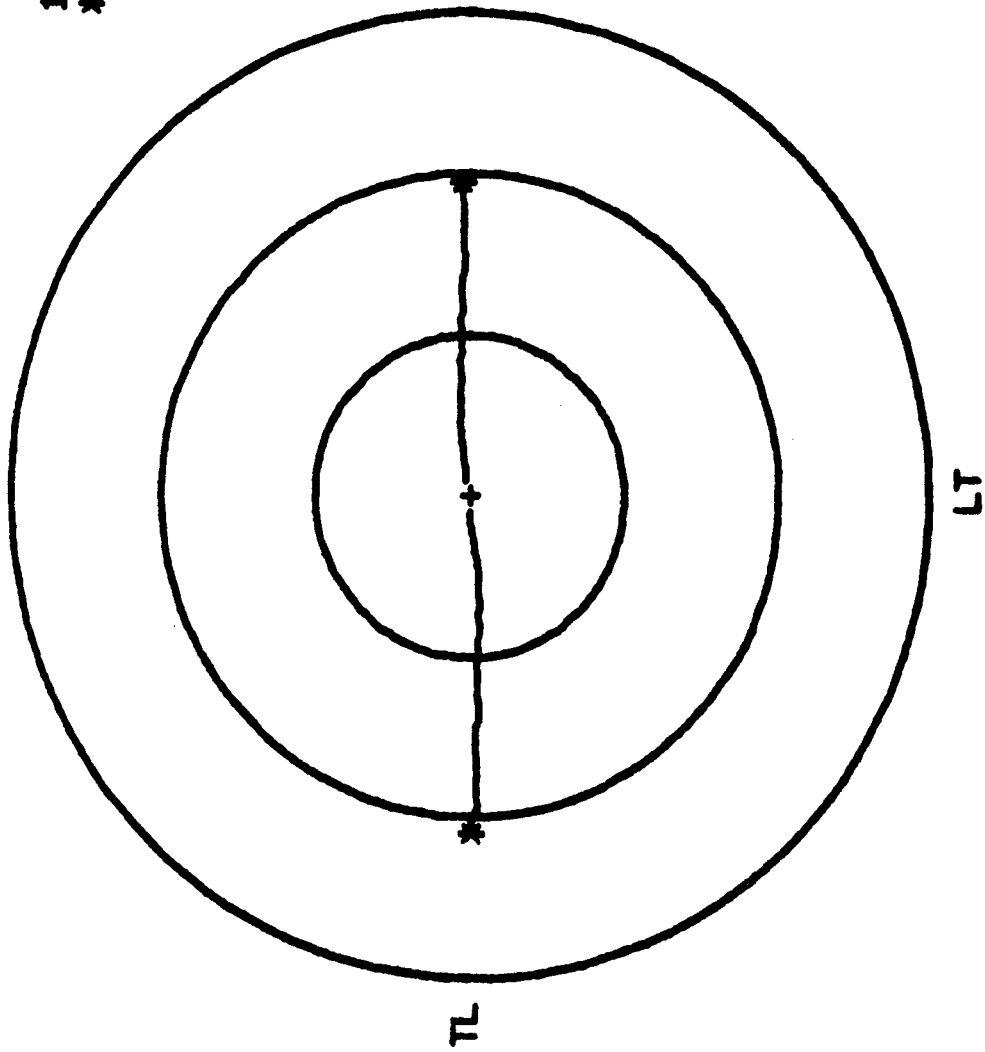
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	42.78	-11.44	15228	39	36.2	182	2
52	42.78	-11.44	15254	40	37	181	2
53	42.78	-11.44	15284	41	38	181	2
54	42.78	-11.44	15309	42	39	181	2



SPECIMEN 2-25

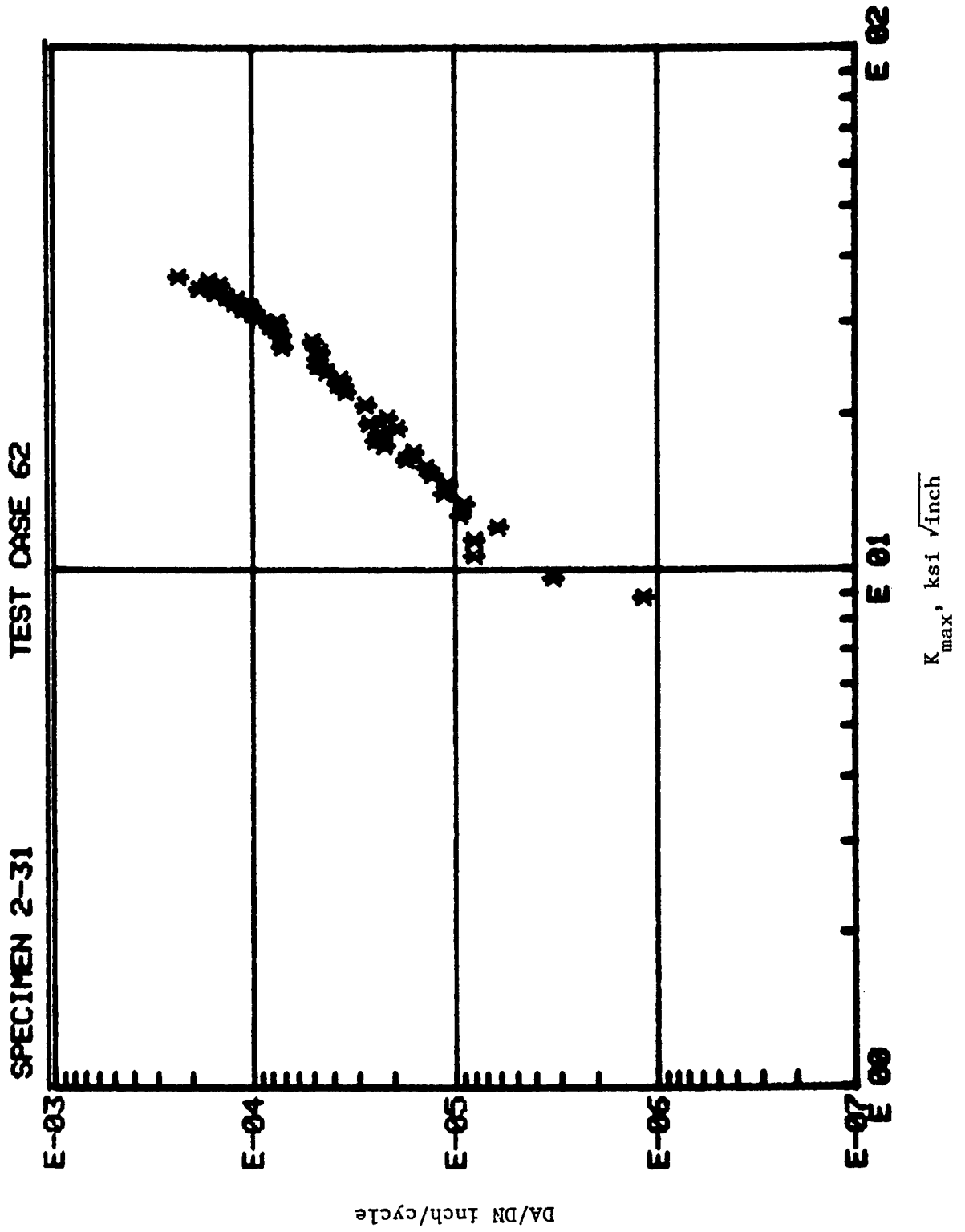
TEST CASE 140

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 62 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-31 FLAW TYPE - 1  
TEMP = 70 F REL HUM = 40 % 09/09/77  
B = .175 IN R(L) = 1 R(T) = 1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	25.67	-6.86	0	2.2	2	180	0
2	25.67	-6.86	10600	2.5	2.2	180	0
3	25.67	-6.86	19770	3	2.9	180	0
4	25.67	-6.86	23200	3.5	3.5	181	0
5	25.67	-6.86	26380	4	4	182	0
6	25.67	-6.86	29550	4.5	4.3	182	0
7	25.67	-6.86	32200	5	4.8	183	2
8	25.67	-6.86	35230	5.5	5.4	183	3
9	25.67	-6.86	37210	6	5.8	184	3
10	25.67	-6.86	39520	6.5	6.3	184	3
11	25.67	-6.86	41640	7	6.9	184	3
12	25.67	-6.86	43250	7.5	7.3	183	3
13	25.67	-6.86	44680	8	7.8	183	3
14	25.67	-6.86	46400	8.5	8.4	183	3
15	25.67	-6.86	47410	9	8.8	183	3
16	25.67	-6.86	48420	9.5	9.3	183	3
17	25.67	-6.86	49480	10	9.8	184	3
18	25.67	-6.86	50770	10.5	10.3	183	4
19	25.67	-6.86	51620	11	10.7	183	4
20	25.67	-6.86	52780	11.5	11.2	183	4
21	25.67	-6.86	56520	13.5	13.3	182	4
22	25.67	-6.86	58250	14.5	14.7	181	4
23	25.67	-6.86	58910	15	15.2	180	3
24	25.67	-6.86	60280	16	16.2	180	3
25	25.67	-6.86	61440	17	17.2	180	4
26	25.67	-6.86	62540	18	18.3	179	4
27	25.67	-6.86	63600	19	19.3	179	4
28	25.67	-6.86	64580	20	20.1	178	4
29	25.67	-6.86	65220	21	20.9	178	4
30	25.67	-6.86	66670	22	22.8	178	4
31	25.67	-6.86	67370	23	23.8	178	4
32	25.67	-6.86	67930	24	24.5	178	4
33	25.67	-6.86	68540	25	25.5	178	3
34	25.67	-6.86	69110	26	26.2	177	2
35	25.67	-6.86	69590	27	27	177	2
36	25.67	-6.86	70040	28	27.8	177	2
37	25.67	-6.86	70450	29	28.6	177	1
38	25.67	-6.86	70920	30	29.5	177	1
39	25.67	-6.86	71310	31	30.4	177	0
40	25.67	-6.86	71710	32	31.3	177	0
41	25.67	-6.86	72050	33	32.1	176	0
42	25.67	-6.86	72450	34	33.5	176	0
43	25.67	-6.86	72780	35	34.9	177	-1
44	25.67	-6.86	73180	36	36.2	177	-1
45	25.67	-6.86	73520	37	37.4	176	-1
46	25.67	-6.86	73910	39	39	177	-1

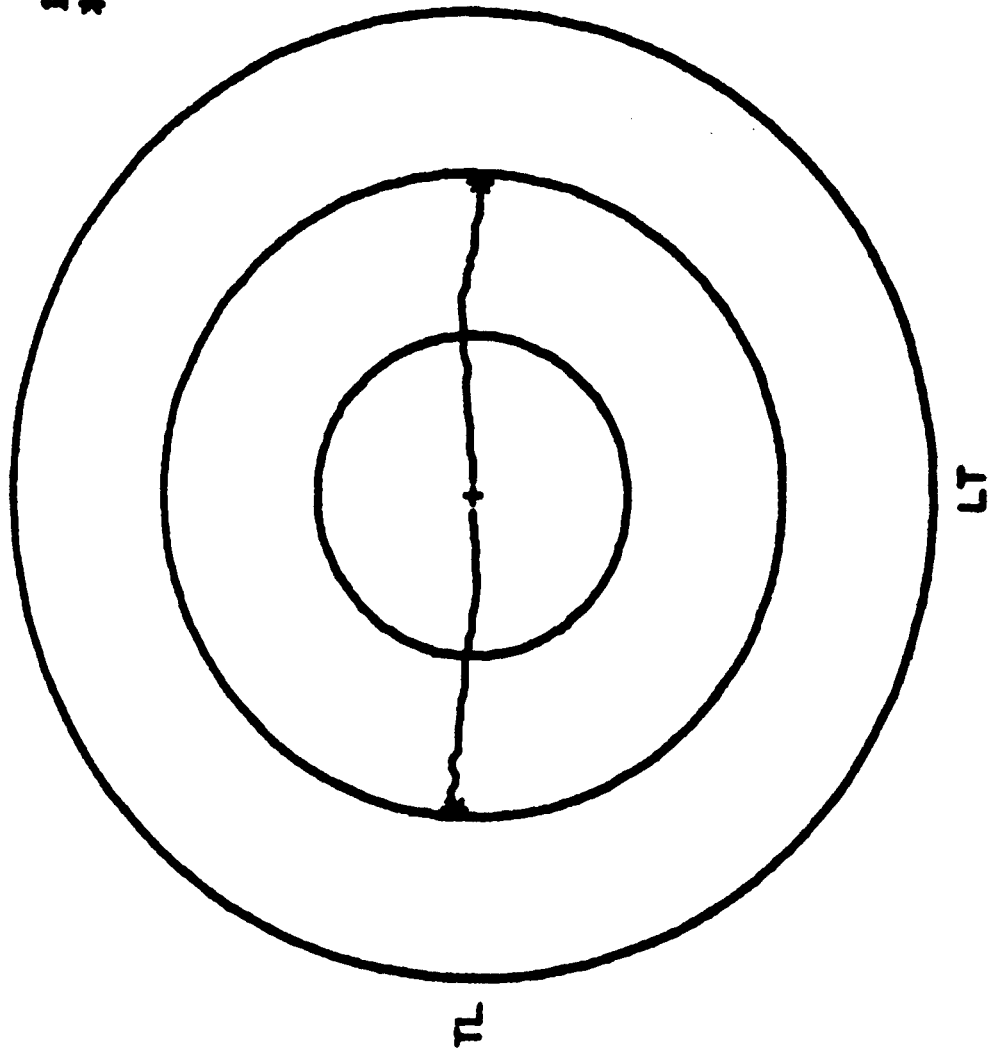




SPECIMEN 2-31

TEST CASE 62

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 37 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-23 FLAW TYPE - 1

TEMP = 74 F REL HUM = 47 % 08/15/77

B = .182 IN R(L) = .1 R(T) = .1

FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

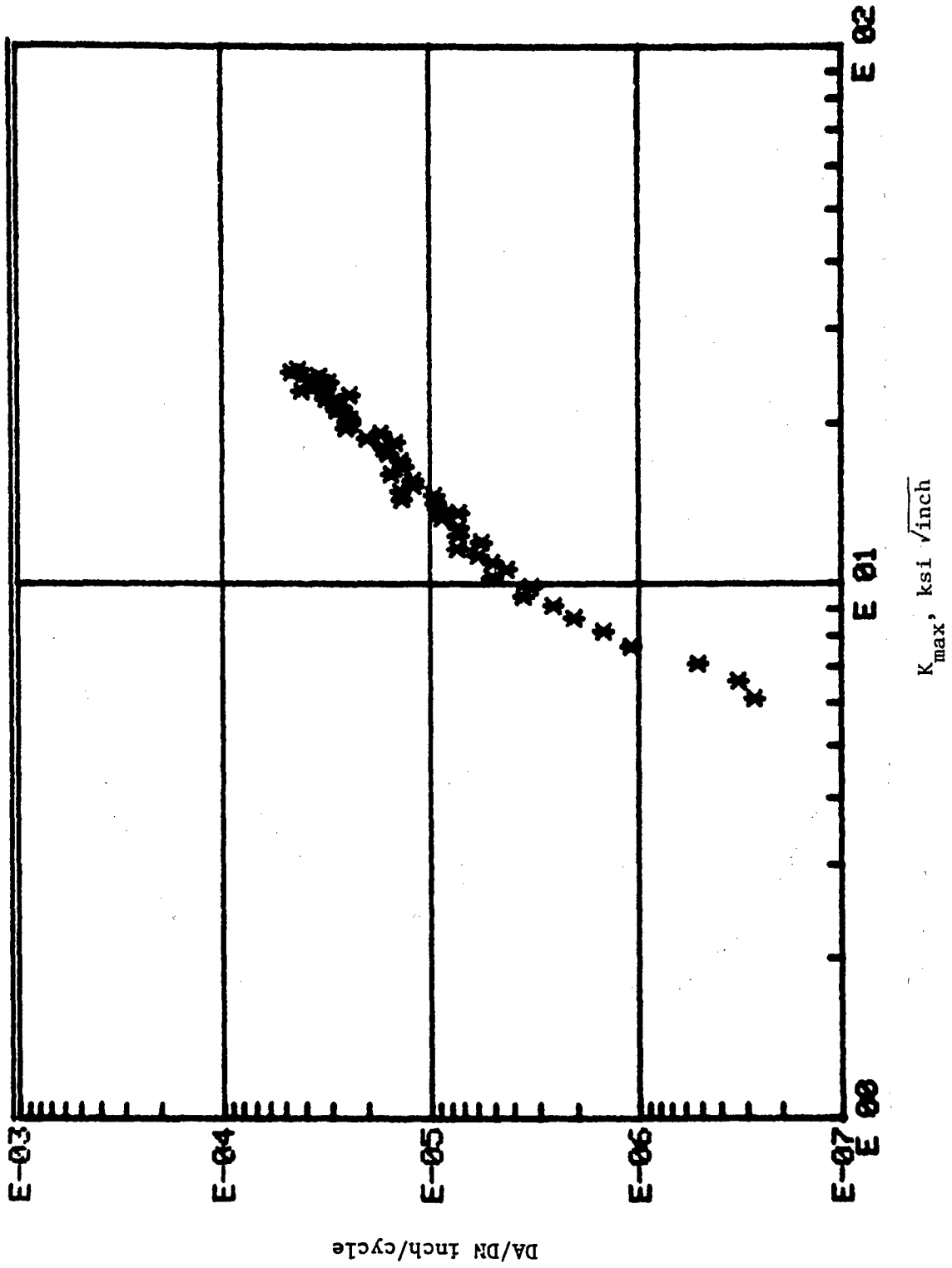
BIAXIAL RATIO = -.5  
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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.11	-4.57	0	2	2.4	180	0
2	17.11	-4.57	72710	2.5	2.7	180	0
3	17.11	-4.57	133100	3	3	180	0
4	17.11	-4.57	181350	3.5	3.5	180	0
5	17.11	-4.57	204130	4	4	180	0
6	17.11	-4.57	222700	4.5	4.6	180	0
7	17.11	-4.57	233720	5	5	180	0
8	17.11	-4.57	245390	5.5	5.7	179	0
9	17.11	-4.57	251020	6	6	179	0
10	17.11	-4.57	259350	6.5	6.6	178	0
11	17.11	-4.57	263800	7	7	178	0
12	17.11	-4.57	270160	7.5	7.6	177	0
13	17.11	-4.57	274650	8	8	177	0
14	17.11	-4.57	278910	8.5	8.5	177	0
15	17.11	-4.57	282280	9	9	177	0
16	17.11	-4.57	287120	9.6	9.5	177	0
17	17.11	-4.57	290200	10	10	177	0
18	17.11	-4.57	297080	11	11	177	0
19	17.11	-4.57	301050	11.5	11.9	177	0
20	17.11	-4.57	303440	12	12.1	178	0
21	17.11	-4.57	306970	12.5	12.9	178	0
22	17.11	-4.57	309610	13.1	13.3	179	0
23	17.11	-4.57	311430	13.5	13.9	179	0
24	17.11	-4.57	313250	14	14.1	179	0
25	17.11	-4.57	315600	14.5	14.9	179	0
26	17.11	-4.57	317680	15	15.4	180	0
27	17.11	-4.57	322010	16.1	16.4	180	1
28	17.11	-4.57	325090	17	17.4	180	1
29	17.11	-4.57	328600	18	18.3	180	1
30	17.11	-4.57	332550	19	19.5	180	1
31	17.11	-4.57	335190	20	20.2	180	1
32	17.11	-4.57	338470	21	21.4	180	0
33	17.11	-4.57	341540	22.1	22.1	181	0
34	17.11	-4.57	343760	23	23	181	0
35	17.11	-4.57	346810	24.1	24	181	-1
36	17.11	-4.57	348680	25	25	181	-1
37	17.11	-4.57	350650	26	25.9	181	-2
38	17.11	-4.57	352830	27	27	181	-2
39	17.11	-4.57	354780	28	28	181	-2
40	17.11	-4.57	356580	29	29	181	-2
41	17.11	-4.57	358420	30	30	181	-3
42	17.11	-4.57	360140	31	31	182	-3
43	17.11	-4.57	361740	32	32	182	-3
44	17.11	-4.57	363790	33	33	182	-3
45	17.11	-4.57	365870	34	34.1	182	-3
46	17.11	-4.57	366700	35	35.2	182	-3
47	17.11	-4.57	368040	36	36	182	-3
48	17.11	-4.57	369580	37	36.9	182	-3
49	17.11	-4.57	370830	38	37.8	182	-2
50	17.11	-4.57	372150	39	38.6	182	-2

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	17.11	-4.57	373350	40	39.8	182	-2
52	17.11	-4.57	374580	41	40.9	183	-2

TEST CASE 37

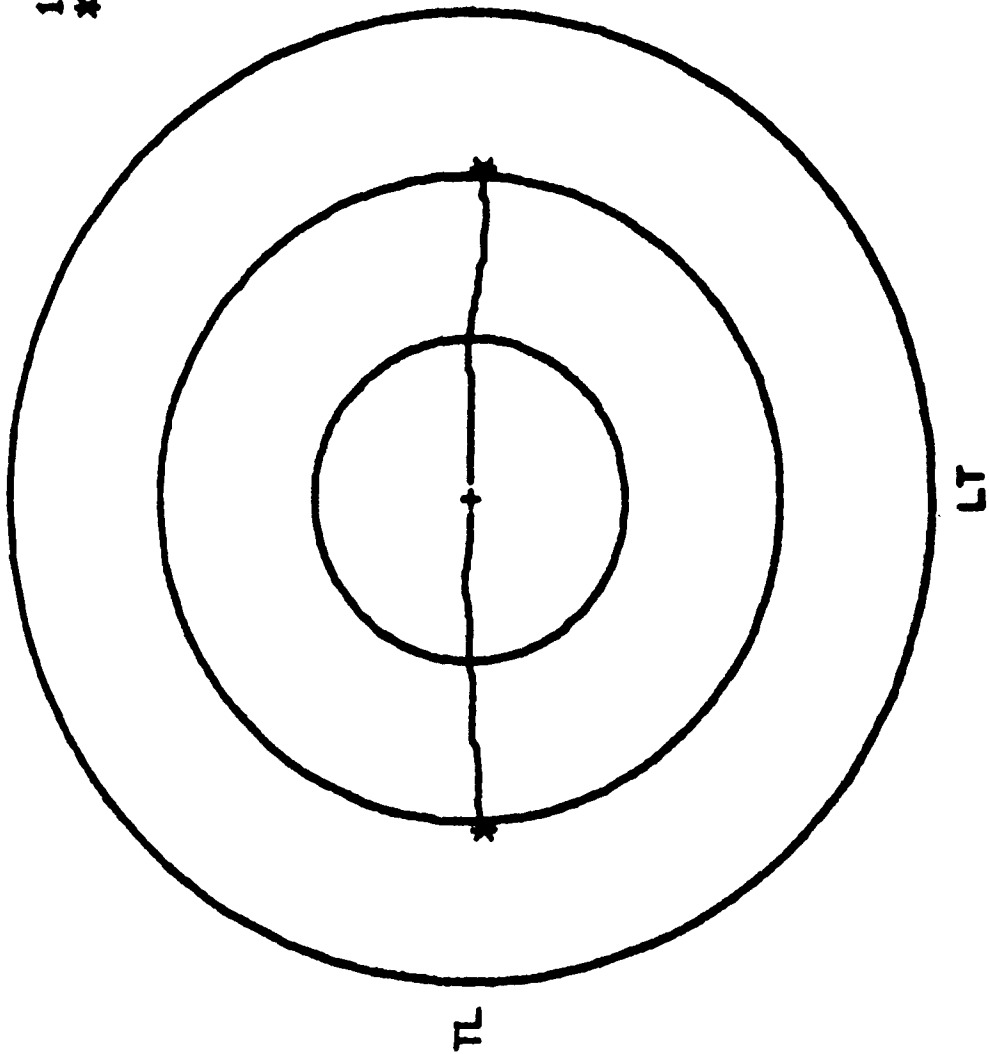
SPECIMEN 2-23



SPECIMEN 2-23

TEST CASE 37

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 38 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-36 FLAW TYPE - 1  
TEMP = 79 F REL HUM = 44 % 08/11/77  
B = .175 IN R(L) = .1 R(T) = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
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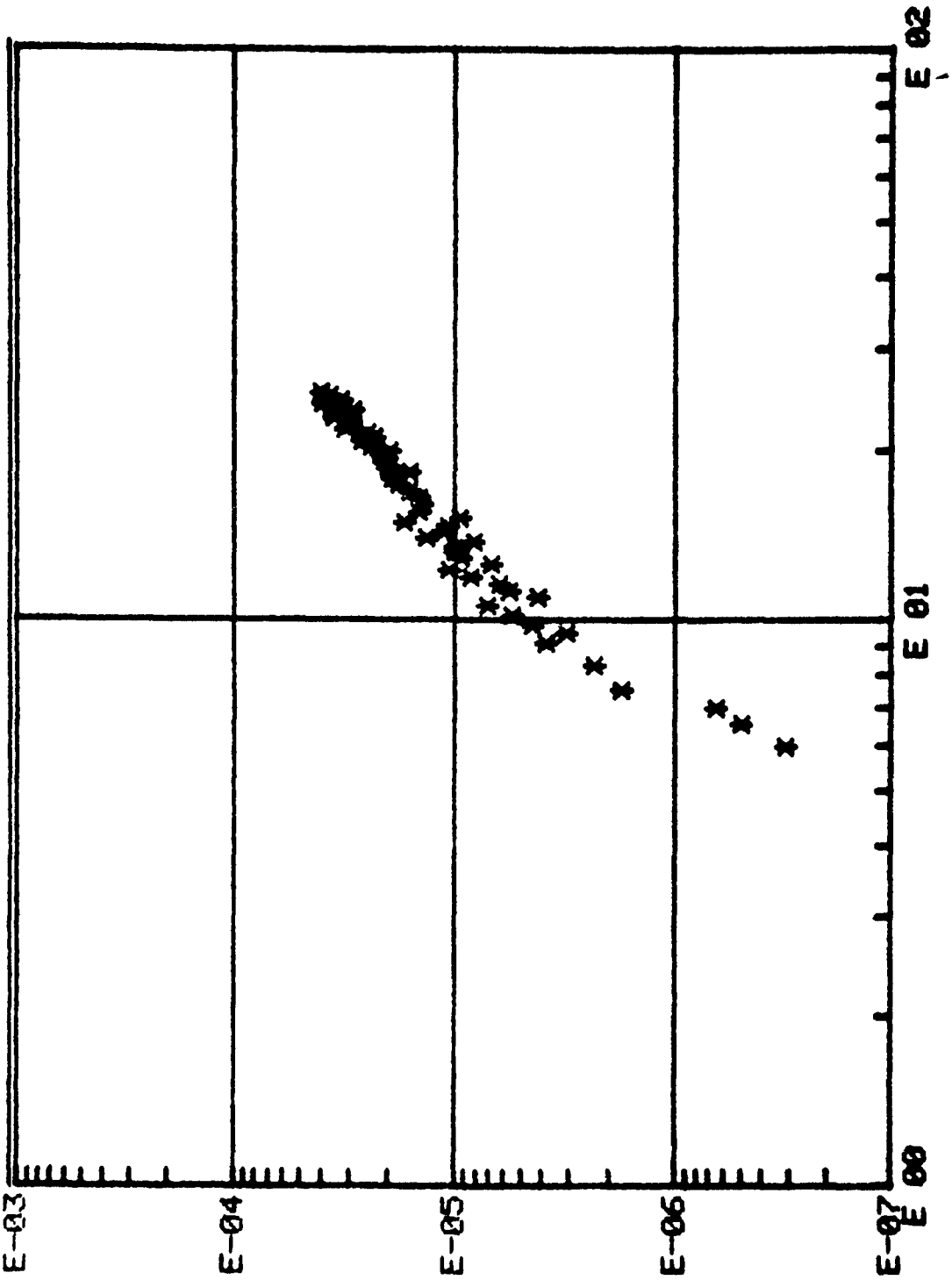
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.11	-4.57	0	2	2.1	180	0
2	17.11	-4.57	80740	2.5	2.6	180	0
3	17.11	-4.57	120870	3	2.9	180	0
4	17.11	-4.57	151470	3.5	3.2	180	0
5	17.11	-4.57	167180	4	3.8	180	0
6	17.11	-4.57	189850	5	4.9	180	0
7	17.11	-4.57	198990	5.7	5.6	180	0
8	17.11	-4.57	203050	6	5.8	180	0
9	17.11	-4.57	208130	6.5	6.2	180	0
10	17.11	-4.57	212700	7	6.7	180	0
11	17.11	-4.57	217660	7.6	7.5	180	-1
12	17.11	-4.57	222430	8	7.9	180	-1
13	17.11	-4.57	226400	8.5	8.3	180	-1
14	17.11	-4.57	230820	9	8.9	180	-1
15	17.11	-4.57	233790	9.5	9.4	180	-2
16	17.11	-4.57	235910	10	9.8	180	-2
17	17.11	-4.57	239980	10.5	10.4	180	-2
18	17.11	-4.57	242950	11	11	180	-2
19	17.11	-4.57	245210	11.5	11.4	180	-2
20	17.11	-4.57	247710	12	11.9	180	-2
21	17.11	-4.57	250150	12.5	12.2	180	-1
22	17.11	-4.57	252550	13	13	180	-1
23	17.11	-4.57	254770	13.5	13.5	180	-1
24	17.11	-4.57	257320	14.1	14	180	-1
25	17.11	-4.57	258800	14.6	14.5	180	-1
26	17.11	-4.57	261430	15	15.1	180	-1
27	17.11	-4.57	265070	16	16.2	180	-1
28	17.11	-4.57	268420	17	17.1	180	-1
29	17.11	-4.57	271700	18	18	180	-1
30	17.11	-4.57	274800	19	19	180	-2
31	17.11	-4.57	277600	20	20	180	-2
32	17.11	-4.57	280200	21	21	179	-2
33	17.11	-4.57	283330	22	22	179	-2
34	17.11	-4.57	285800	23	23	179	-2
35	17.11	-4.57	288400	24	24.2	179	-2
36	17.11	-4.57	290700	25	25.2	178	-2
37	17.11	-4.57	293100	26	26.1	178	-2
38	17.11	-4.57	295100	27	27	178	-1
39	17.11	-4.57	296900	28	27.9	178	-1
40	17.11	-4.57	298950	29	28.8	178	-1
41	17.11	-4.57	300950	30	29.8	178	-1
42	17.11	-4.57	302300	31	30.5	178	0
43	17.11	-4.57	304000	32	31.5	178	0
44	17.11	-4.57	305700	33	32.5	178	0
45	17.11	-4.57	307200	34.1	33.5	177	1
46	17.11	-4.57	308550	35	34.5	177	1
47	17.11	-4.57	310300	36	35.5	177	1
48	17.11	-4.57	311500	37	36.2	177	1
49	17.11	-4.57	312900	38	37.4	177	2
50	17.11	-4.57	314500	39	38.6	177	2



REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	17.11	-4.57	315870	40	39.5	177	2
52	17.11	-4.57	317180	41	40.6	177	2

# SPECIMEN 2-36 TEST CASE 38

E-03



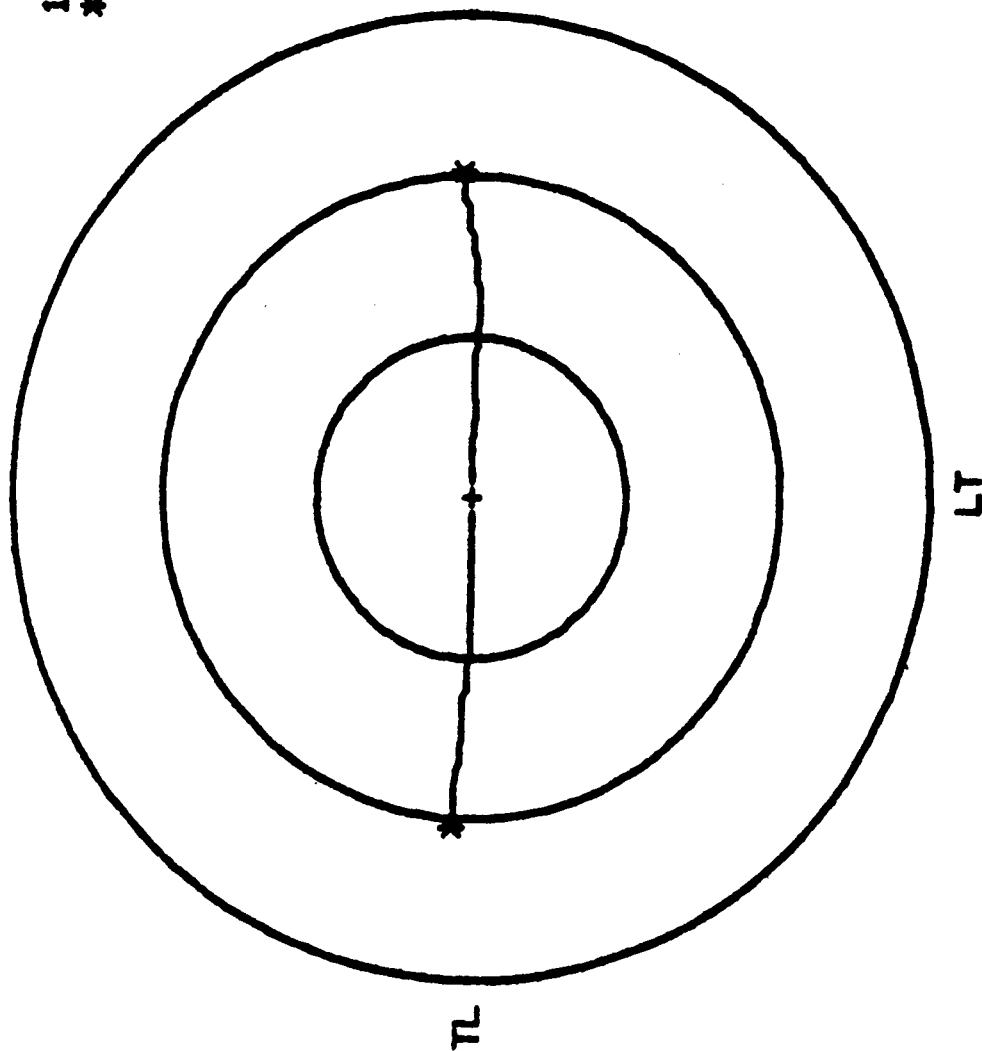
K<sub>max</sub>, ksi  $\sqrt{\text{inch}}$

DA/DN inch/cycle

SPECIMEN 2-36

TEST CASE 38

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 2024-T3 TEST CASE 33 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-18 FLAW TYPE - 1

TEMP = 74 F REL HUM = 48 % 08/10/77

B = .18 IN R(L) = .1 R(T) = .1

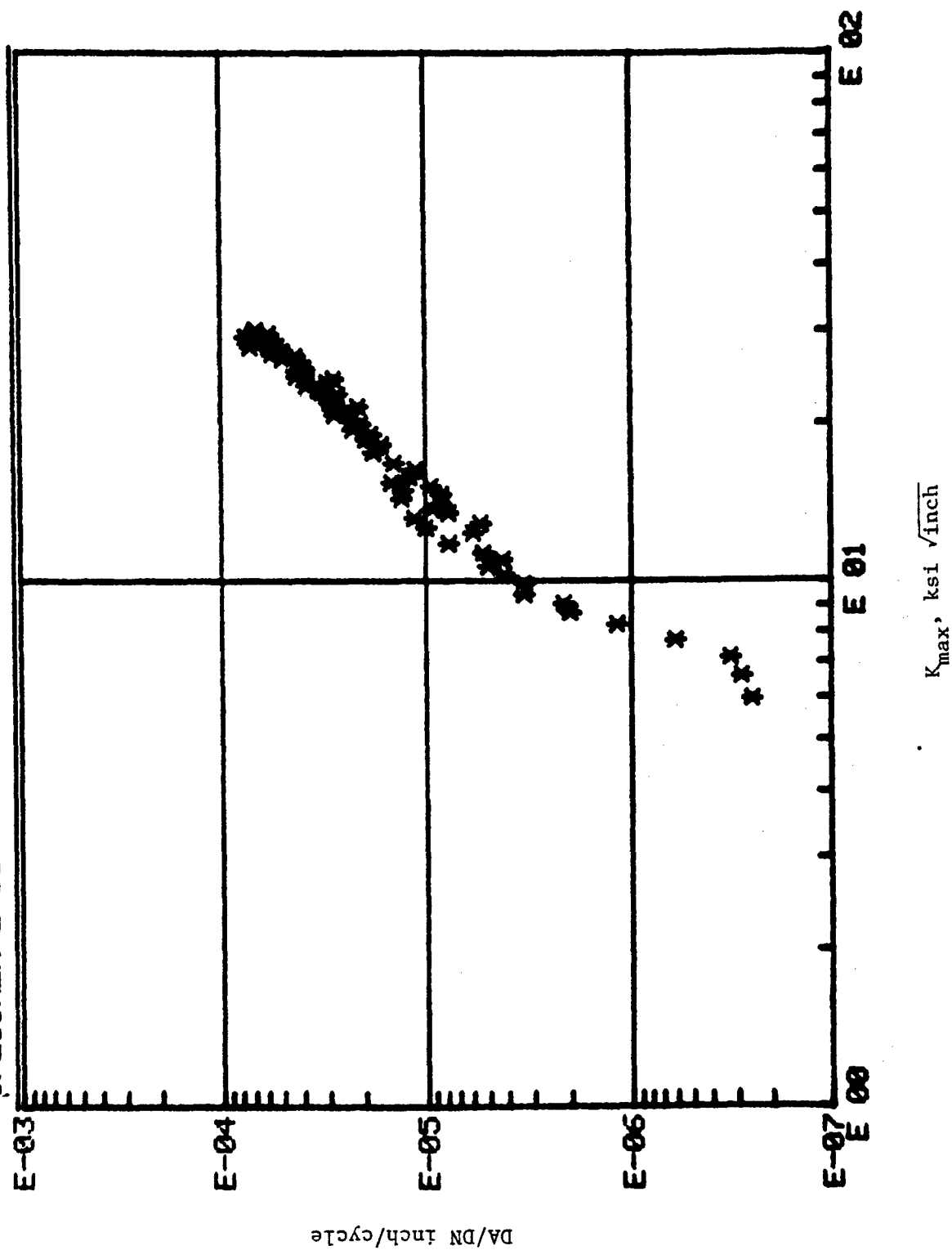
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = .5

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	22.3	15.07	0	1.5	2.7	180	0
2	22.3	15.07	78760	2	3	180	0
3	22.3	15.07	184240	2.5	3.7	180	0
4	22.3	15.07	245820	3	4	180	0
5	22.3	15.07	299440	3.5	4.8	180	0
6	22.3	15.07	320780	4.1	5.2	180	0
7	22.3	15.07	330840	4.5	5.6	180	0
8	22.3	15.07	340140	5	5.9	180	0
9	22.3	15.07	348420	5.5	6.5	179	0
10	22.3	15.07	355930	6	7	179	0
11	22.3	15.07	362000	6.5	7.5	178	0
12	22.3	15.07	367060	7	8	178	0
13	22.3	15.07	372960	7.5	8.5	177	0
14	22.3	15.07	377240	8	8.9	177	0
15	22.3	15.07	384060	9	10	177	0
16	22.3	15.07	388320	9.5	10.5	177	0
17	22.3	15.07	390580	10	10.9	177	0
18	22.3	15.07	394260	10.5	11.2	177	0
19	22.3	15.07	396910	11	11.9	177	0
20	22.3	15.07	399820	11.5	12.3	177	0
21	22.3	15.07	401700	12	12.5	177	0
22	22.3	15.07	405870	12.5	13.4	177	0
23	22.3	15.07	407770	13	13.9	177	0
24	22.3	15.07	410720	13.5	14.4	177	0
25	22.3	15.07	412840	14	15	177	0
26	22.3	15.07	414700	14.5	15.2	177	0
27	22.3	15.07	416740	15	15.9	177	0
28	22.3	15.07	421120	16	17	177	0
29	22.3	15.07	425570	17	18	177	0
30	22.3	15.07	429960	18	19.5	177	0
31	22.3	15.07	435110	20	21.2	177	0
32	22.3	15.07	438290	21	22.3	177	1
33	22.3	15.07	441720	22.2	23.8	176	1
34	22.3	15.07	443750	23	24.5	176	1
35	22.3	15.07	446200	24	25.7	176	1
36	22.3	15.07	448990	25	27	176	1
37	22.3	15.07	451180	26	28	176	1
38	22.3	15.07	453000	27	29	176	0
39	22.3	15.07	455130	28	30	176	0
40	22.3	15.07	457610	29	31.1	176	0
41	22.3	15.07	459420	30	32.2	175	0
42	22.3	15.07	461300	31	33.4	176	0
43	22.3	15.07	463080	32	34.3	176	0
44	22.3	15.07	464420	33	35	176	0
45	22.3	15.07	465930	34	36	176	0
46	22.3	15.07	467250	35	37	176	1
47	22.3	15.07	468920	36	38	176	1
48	22.3	15.07	470710	37	39	176	1
49	22.3	15.07	471900	38	40	176	1
50	22.3	15.07	473190	39	41	176	1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	22.3	15.07	474380	40	42	175	1
52	22.3	15.07	475060	41	43.3	176	1
53	22.3	15.07	476940	42	44.1	176	1
54	22.3	15.07	478290	43	45.4	176	1
55	22.3	15.07	479610	44	47	176	2
56	22.3	15.07	480840	45	48.1	176	2
57	22.3	15.07	481700	46	49	176	2
58	22.3	15.07	483210	47	51	176	2
59	22.3	15.07	483850	48	51.8	176	2
60	22.3	15.07	484800	49	52.8	176	2
61	22.3	15.07	485710	50	53.9	175	2
62	22.3	15.07	486640	51	55	176	2
63	22.3	15.07	487500	52	56	176	2
64	22.3	15.07	488170	53	57	176	2
65	22.3	15.07	489030	54	58	176	2
66	22.3	15.07	489810	55	59.1	176	2
67	22.3	15.07	490560	56	60.1	176	2

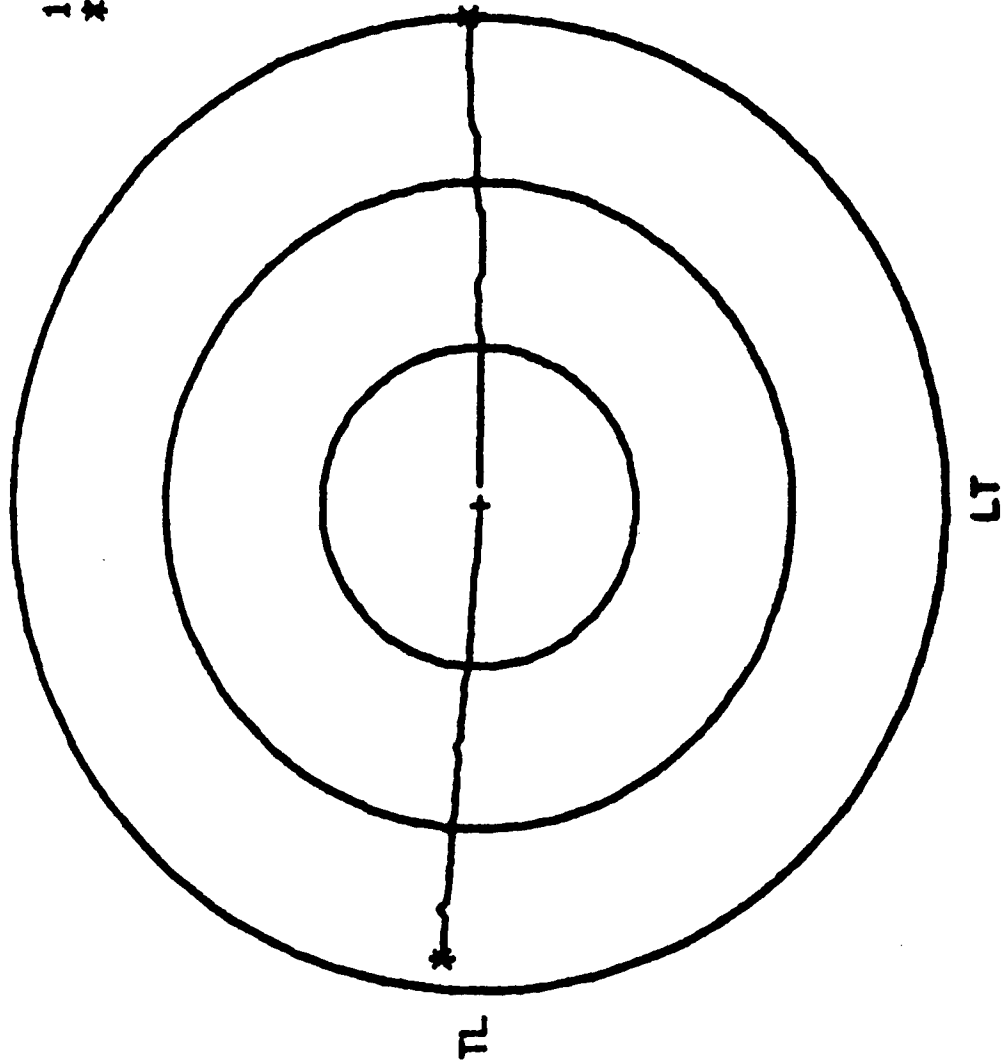
**SPECIMEN 2-18**



SPECIMEN 2-18

TEST CASE 35

1 IN SPACING  
\* TEST STOPPED



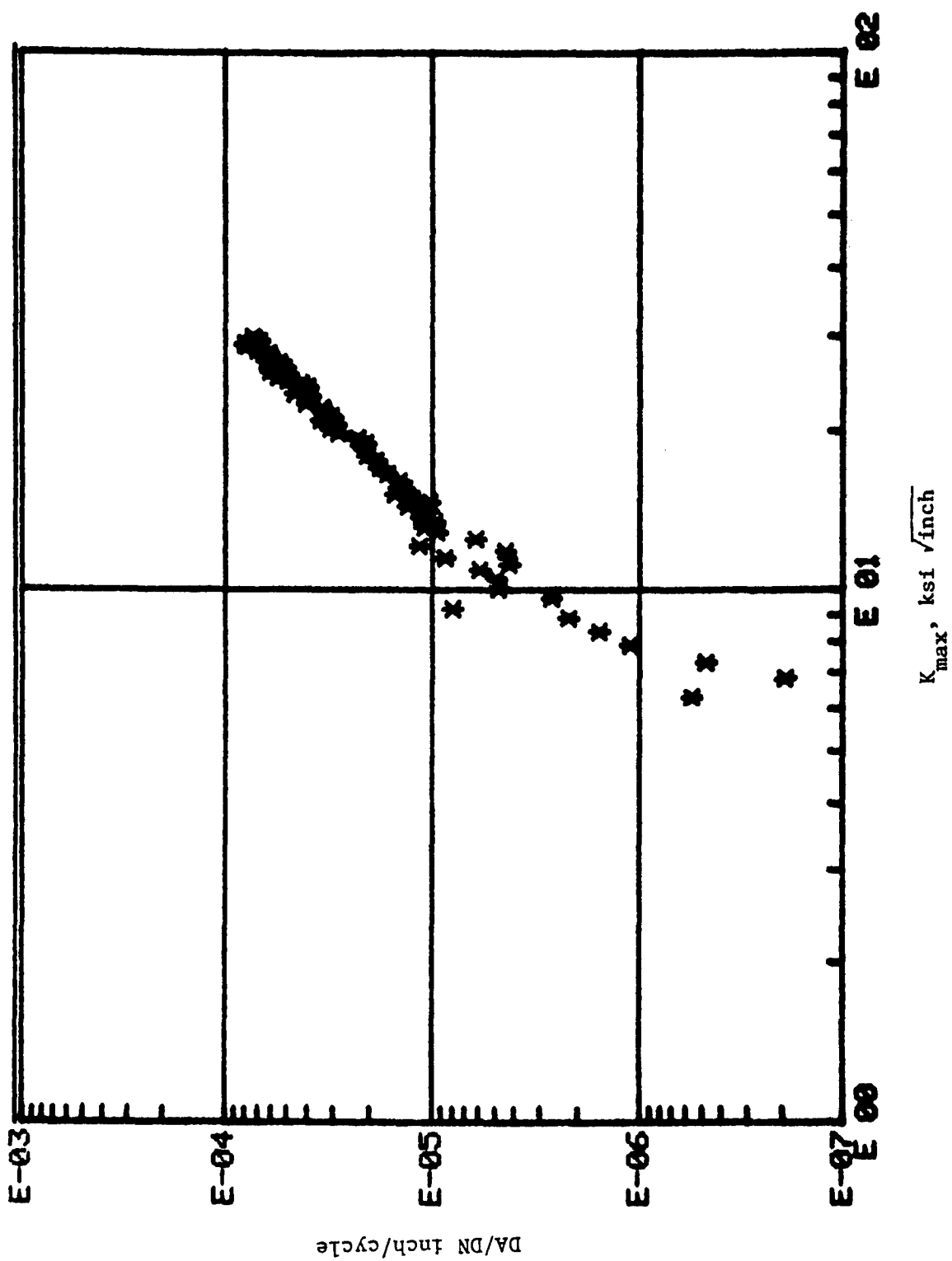


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CRACK GROWTH TEST OF 2024-T3 TEST CASE 36 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-10 FLAW TYPE - 1  
TEMP = 74 F REL HUM = 50 % 08/08/77  
B = .178 IN R(L) = .1 R(T) = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	22.3	15.07	0	2.3	2.2	180	0
2	22.3	15.07	54040	3	2.7	180	0
3	22.3	15.07	130790	3.5	2.8	180	0
4	22.3	15.07	188200	4	3.4	181	0
5	22.3	15.07	213160	4.5	4	181	0
6	22.3	15.07	229140	5	4.5	182	0
7	22.3	15.07	240570	5.5	5	182	0
8	22.3	15.07	243390	6	5.4	182	0
9	22.3	15.07	253810	6.5	6	182	0
10	22.3	15.07	259040	7	6.5	182	0
11	22.3	15.07	266740	7.7	7.3	182	0
12	22.3	15.07	269300	8	7.6	182	0
13	22.3	15.07	275210	8.5	8.1	182	0
14	22.3	15.07	278370	9	8.7	182	0
15	22.3	15.07	282880	9.5	9	182	0
16	22.3	15.07	285250	10	9.6	182	1
17	22.3	15.07	289300	10.5	10.1	182	1
18	22.3	15.07	292230	11	10.7	182	1
19	22.3	15.07	294990	11.5	11.4	182	1
20	22.3	15.07	297560	12	11.9	182	1
21	22.3	15.07	299760	12.5	12.4	182	1
22	22.3	15.07	302410	13	13	183	2
23	22.3	15.07	304900	13.6	13.7	183	2
24	22.3	15.07	306590	14	14	183	2
25	22.3	15.07	308980	14.5	14.7	183	2
26	22.3	15.07	310630	15	15.2	183	2
27	22.3	15.07	314290	16	16.2	183	2
28	22.3	15.07	317750	17	17.2	184	3
29	22.3	15.07	320940	18	18.3	184	3
30	22.3	15.07	323870	19	19.4	184	3
31	22.3	15.07	326670	20	20.5	184	3
32	22.3	15.07	329320	21	21.7	184	3
33	22.3	15.07	331660	22	22.7	184	3
34	22.3	15.07	334260	23	23.9	184	3
35	22.3	15.07	336660	24.1	25	185	4
36	22.3	15.07	338780	25.2	26.3	185	4
37	22.3	15.07	340000	26	27	185	4
38	22.3	15.07	341790	27	28.1	186	4
39	22.3	15.07	343160	28	29	186	4
40	22.3	15.07	344930	29	30.2	186	5
41	22.3	15.07	346490	30	31.3	186	5
42	22.3	15.07	347890	31	32.2	186	5
43	22.3	15.07	349310	32	33.5	186	5
44	22.3	15.07	350620	33	34.6	186	5
45	22.3	15.07	352030	34.1	35.7	187	6
46	22.3	15.07	353060	35	36.7	187	6
47	22.3	15.07	354290	36	37.7	187	5
48	22.3	15.07	355420	37	38.5	187	5
49	22.3	15.07	356520	38	39.4	187	5
50	22.3	15.07	357510	39	40.4	187	4

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	22.3	15.07	358410	40	41.4	187	4
52	22.3	15.07	359670	41.1	42.8	187	4
53	22.3	15.07	360460	42	43.8	187	4
54	22.3	15.07	361380	43	44.7	187	4
55	22.3	15.07	362430	44	46	187	3
56	22.3	15.07	363350	45	47	188	3
57	22.3	15.07	364140	46	48	188	3
58	22.3	15.07	364840	47	48.7	188	3
59	22.3	15.07	365690	48	49.8	187	3
60	22.3	15.07	366460	49	50.7	187	3
61	22.3	15.07	367180	50	51.7	187	3
62	22.3	15.07	367940	51	52.8	187	3
63	22.3	15.07	368550	52	53.7	187	2
64	22.3	15.07	369140	53	54.6	187	2
65	22.3	15.07	369880	54	55.6	187	2
66	22.3	15.07	370580	55	56.6	186	2
67	22.3	15.07	371130	56	57.2	186	2

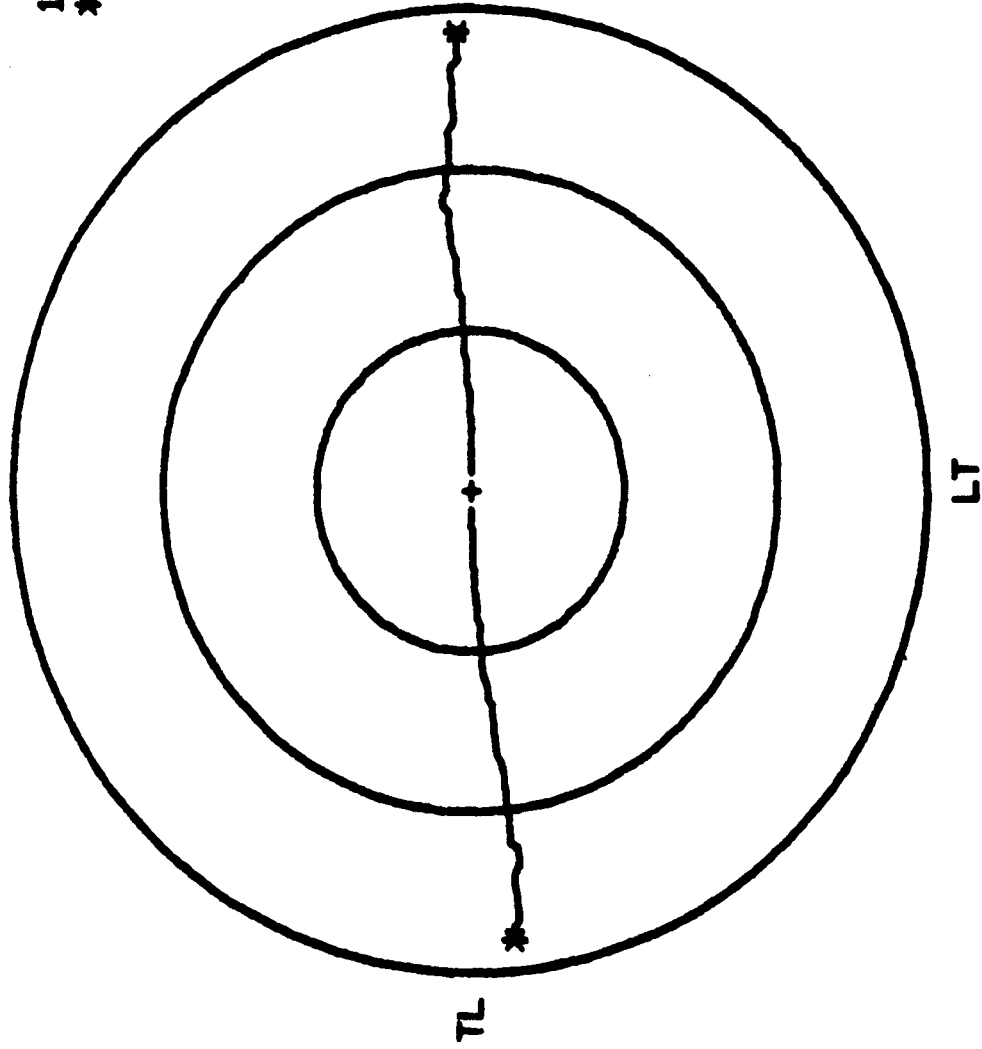
**SPECIMEN 2-10**



SPECIMEN 2-10

TEST CASE 36

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 2024-T3 TEST CASE 136 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-22 FLAW TYPE - 1

TEMP = 79 F

REL HUM = 43 %

09716777

B = .174 IN

R(L) = .1

R(T) = .1

FREQ = 2 HZ

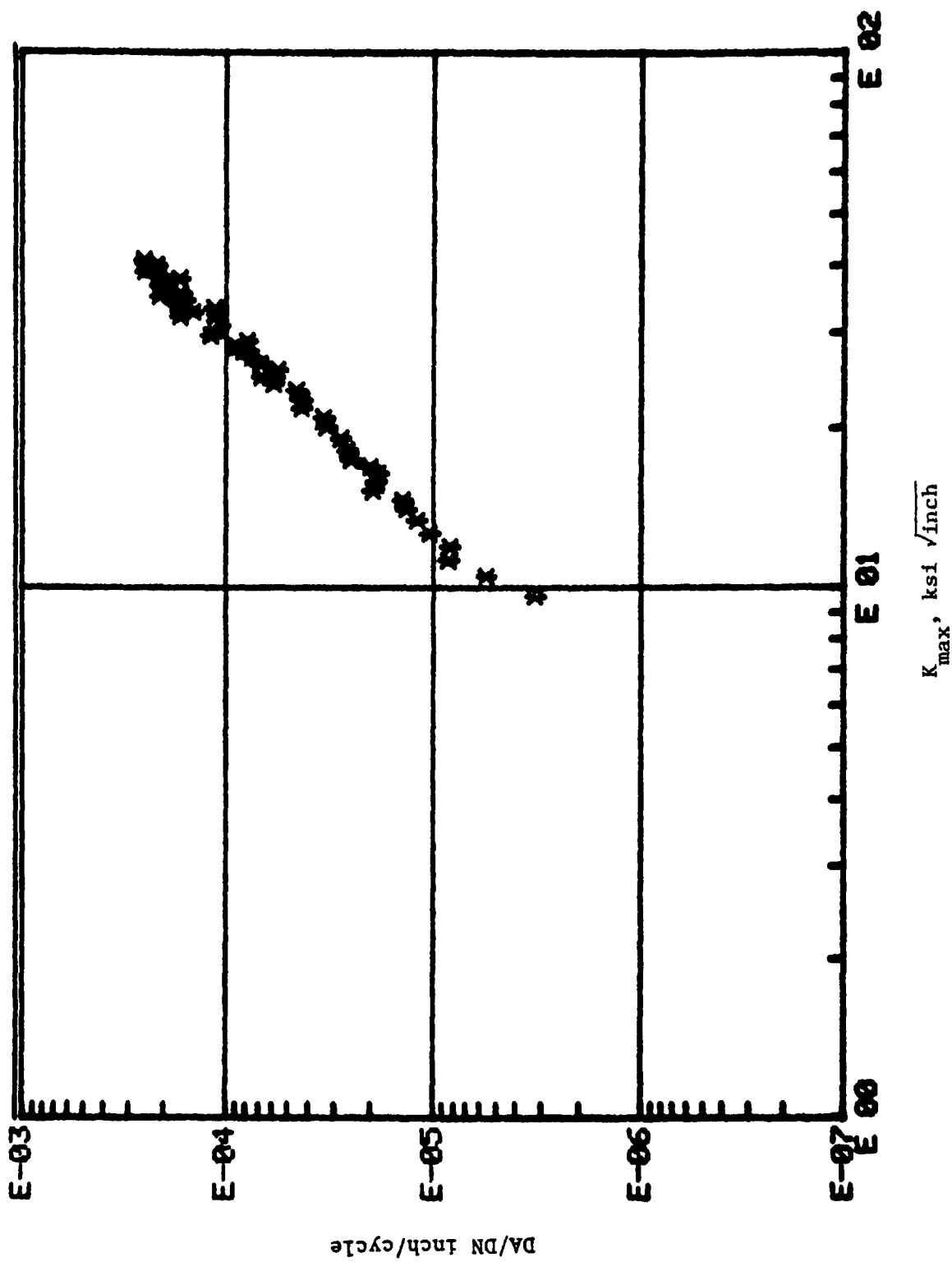
PHASE ANGLE = 0

GRID SPACING = .05 IN

BIAXIAL RATIO = .5

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	33.45	22.61	0	2.5	2.3	188	0
2	33.45	22.61	7690	3	2.8	181	0
3	33.45	22.61	12150	3.5	3.3	182	0
4	33.45	22.61	15120	4	3.8	183	0
5	33.45	22.61	17830	4.5	4.2	183	0
6	33.45	22.61	20470	5	4.8	184	0
7	33.45	22.61	22560	5.5	5.3	184	1
8	33.45	22.61	24400	6	5.8	184	1
9	33.45	22.61	26000	6.5	6.2	184	1
10	33.45	22.61	27540	7	6.9	184	1
11	33.45	22.61	28880	7.5	7.4	184	2
12	33.45	22.61	30360	8.1	7.9	185	2
13	33.45	22.61	31480	8.5	8.4	185	2
14	33.45	22.61	32580	9	9	185	3
15	33.45	22.61	34410	10	9.9	185	3
16	33.45	22.61	36100	11	10.8	185	3
17	33.45	22.61	37700	12	11.9	186	3
18	33.45	22.61	39180	13	12.9	186	3
19	33.45	22.61	40340	14	13.9	186	3
20	33.45	22.61	41560	15	15	186	3
21	33.45	22.61	42820	16.2	16.1	186	3
22	33.45	22.61	43540	17	17	186	3
23	33.45	22.61	44290	18	18	187	3
24	33.45	22.61	45220	19	19.1	186	3
25	33.45	22.61	45960	20	20.1	186	3
26	33.45	22.61	46590	21	21	187	3
27	33.45	22.61	47220	22	22.1	187	3
28	33.45	22.61	47780	23	23.1	186	3
29	33.45	22.61	48410	24	24.1	186	3
30	33.45	22.61	48980	25	25.8	186	3
31	33.45	22.61	49420	26	26.8	187	3
32	33.45	22.61	49910	27	27.9	187	3
33	33.45	22.61	50430	28.2	29	187	3
34	33.45	22.61	50780	29	30	187	3
35	33.45	22.61	51030	30	30.9	187	3
36	33.45	22.61	51540	31	32.2	187	3
37	33.45	22.61	51920	32	33.8	187	3
38	33.45	22.61	52270	33	35	187	3
39	33.45	22.61	52510	34	36	187	3
40	33.45	22.61	52830	35	37.1	187	3
41	33.45	22.61	53200	36	38.9	187	3
42	33.45	22.61	53440	37	39.9	188	3
43	33.45	22.61	53700	38	41	187	3
44	33.45	22.61	54000	39	42	187	3
45	33.45	22.61	54340	40	43.9	187	3
46	33.45	22.61	54550	41	45	187	3
47	33.45	22.61	54820	42	46.5	188	2
48	33.45	22.61	55110	43	48	188	2
49	33.45	22.61	55340	44	49.3	188	2
50	33.45	22.61	55530	45	50.2	188	2

SPECIMEN 2-22 TEST CASE 136

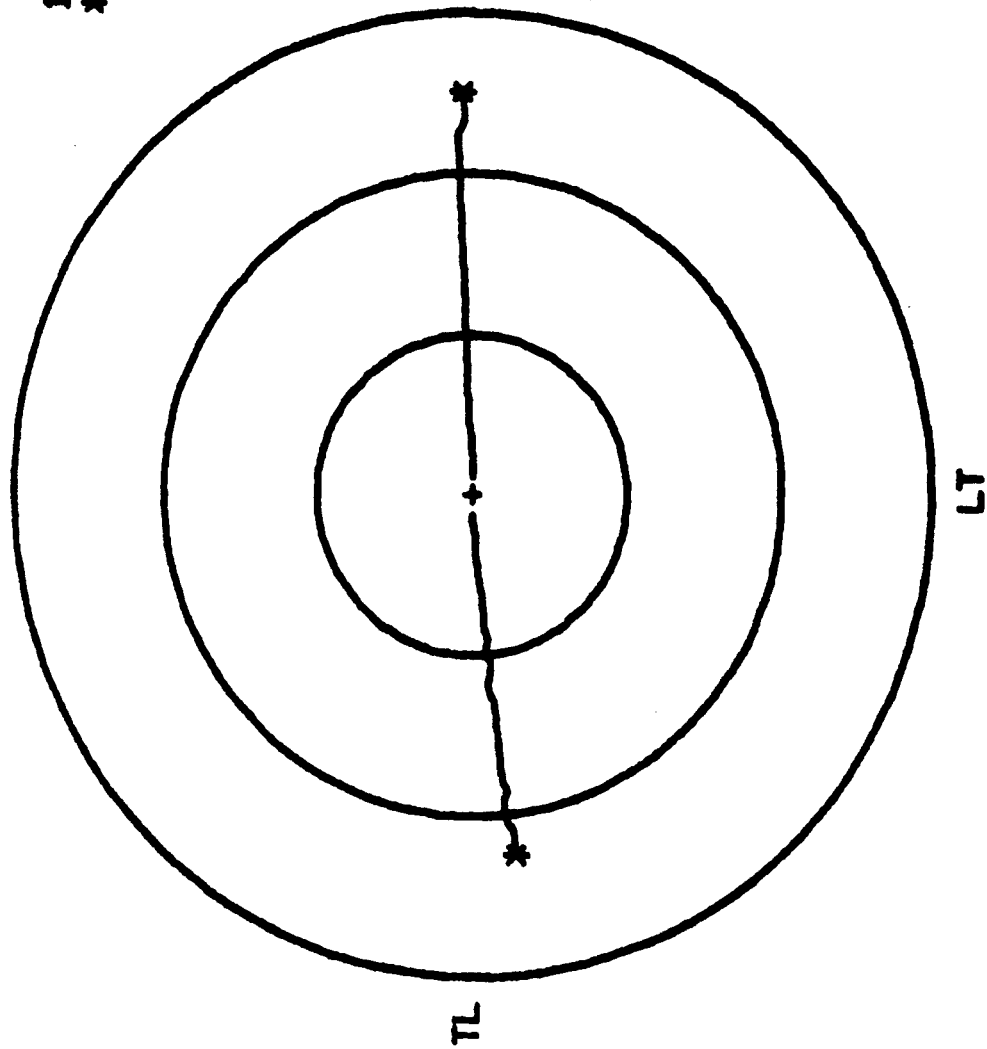




SPECIMEN 2-22

TEST CASE 136

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 2024-T3 TEST CASE 61 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-20 FLAW TYPE - 1

TEMP = 78 F

REL HUM = 44 %

08/25/77

B = .18 IN

R(L) = .1

R(T) = .1

FREQ = 5 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

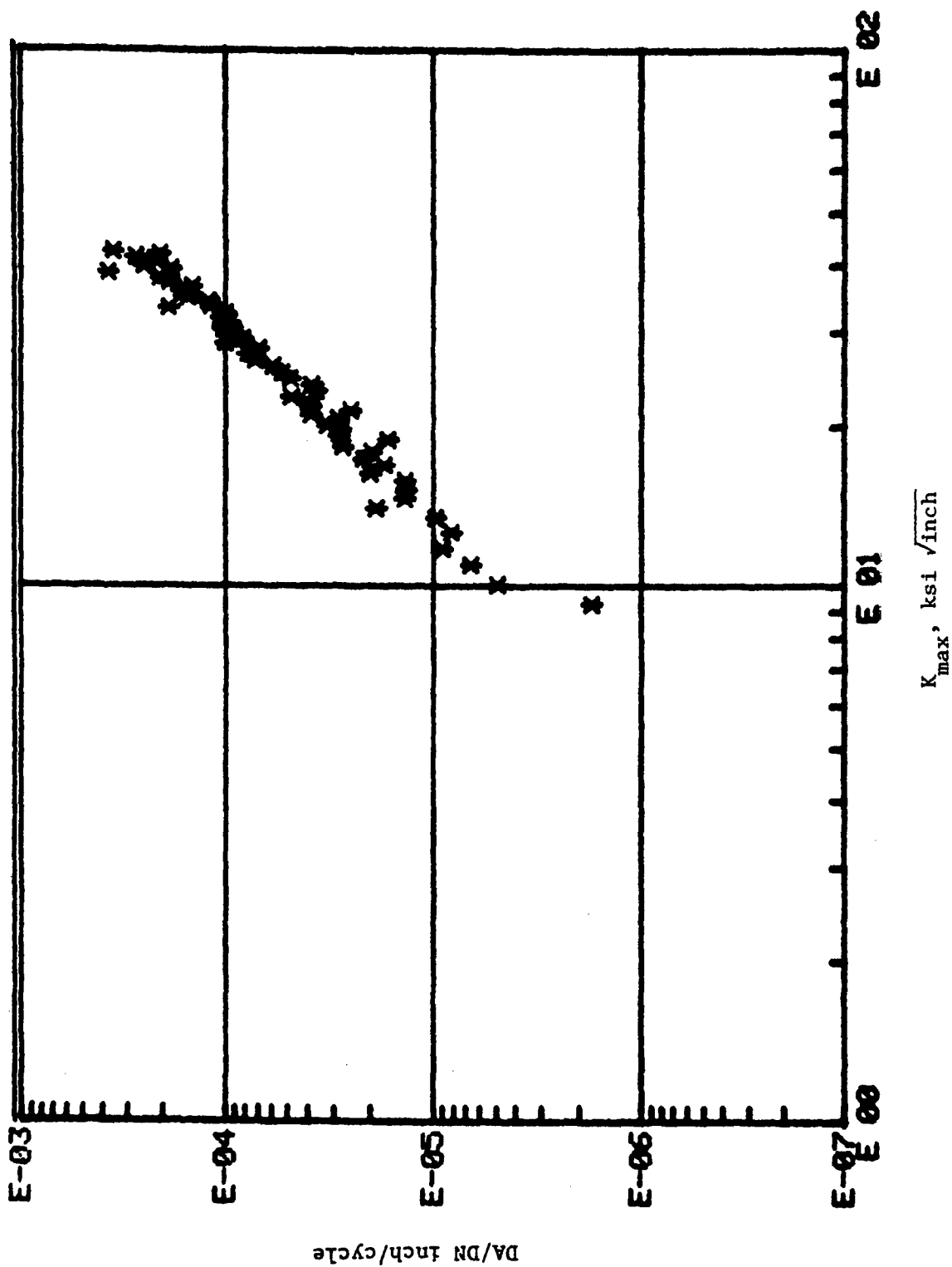
BIAXIAL RATIO = .5

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	33.45	22.61	0	2.7	1.9	180	1
2	33.45	22.61	8650	3	2.2	180	2
3	33.45	22.61	14230	3.5	2.8	180	2
4	33.45	22.61	18380	4	3.4	180	3
5	33.45	22.61	21410	4.5	4	180	4
6	33.45	22.61	25060	5	4.7	181	4
7	33.45	22.61	28160	5.7	5.2	180	5
8	33.45	22.61	29100	6	5.6	180	5
9	33.45	22.61	30930	6.5	6.1	180	5
10	33.45	22.61	32790	7	6.6	180	5
11	33.45	22.61	34610	7.6	7	180	5
12	33.45	22.61	35980	8	7.7	180	5
13	33.45	22.61	37280	8.5	8.1	179	5
14	33.45	22.61	38560	9	8.7	179	5
15	33.45	22.61	39690	9.5	9.1	179	5
16	33.45	22.61	40700	10	9.7	179	5
17	33.45	22.61	42060	10.5	10.1	178	6
18	33.45	22.61	42940	11	10.6	178	6
19	33.45	22.61	43750	11.5	11	178	6
20	33.45	22.61	44600	12	11.6	178	6
21	33.45	22.61	45650	12.6	12.2	178	7
22	33.45	22.61	46100	13	12.5	178	7
23	33.45	22.61	47100	13.5	13	178	7
24	33.45	22.61	47740	14	13.5	178	6
25	33.45	22.61	48370	14.5	14	178	6
26	33.45	22.61	49100	15	14.9	178	6
27	33.45	22.61	50330	16	15.7	178	5
28	33.45	22.61	51310	17	16.2	177	4
29	33.45	22.61	52230	18	17	177	4
30	33.45	22.61	53170	19	18	177	3
31	33.45	22.61	54020	20	19	177	3
32	33.45	22.61	54720	21	20	178	2
33	33.45	22.61	55360	22	21	178	2
34	33.45	22.61	56090	23	22	178	1
35	33.45	22.61	56590	24	23	178	1
36	33.45	22.61	57220	25	24.1	178	1
37	33.45	22.61	57830	26	25.3	179	1
38	33.45	22.61	58390	27	26.6	180	1
39	33.45	22.61	59020	28	28	181	0
40	33.45	22.61	59610	29	29.5	181	0
41	33.45	22.61	60290	30.1	31.1	182	0
42	33.45	22.61	60530	31	32	182	0
43	33.45	22.61	60960	32	33	182	0
44	33.45	22.61	61400	33	34.1	183	0
45	33.45	22.61	61830	34.1	35.6	183	0
46	33.45	22.61	62100	35	36.4	183	0
47	33.45	22.61	62410	36	37.4	183	0
48	33.45	22.61	62960	37	39.6	184	0
49	33.45	22.61	63300	38.1	41	184	0
50	33.45	22.61	63530	39	42	184	0

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	33.45	22.61	63810	40	43.1	184	0
52	33.45	22.61	64020	42	44.2	184	0
53	33.45	22.61	64310	43	45.3	184	0
54	33.45	22.61	64530	44	46.5	184	0
55	33.45	22.61	64790	45	48	184	0
56	33.45	22.61	65030	46	49.1	184	0
57	33.45	22.61	65290	47	50.9	184	0
58	33.45	22.61	65570	48	52.2	184	0
59	33.45	22.61	65770	49	54	184	0

SPECIMEN 2-20

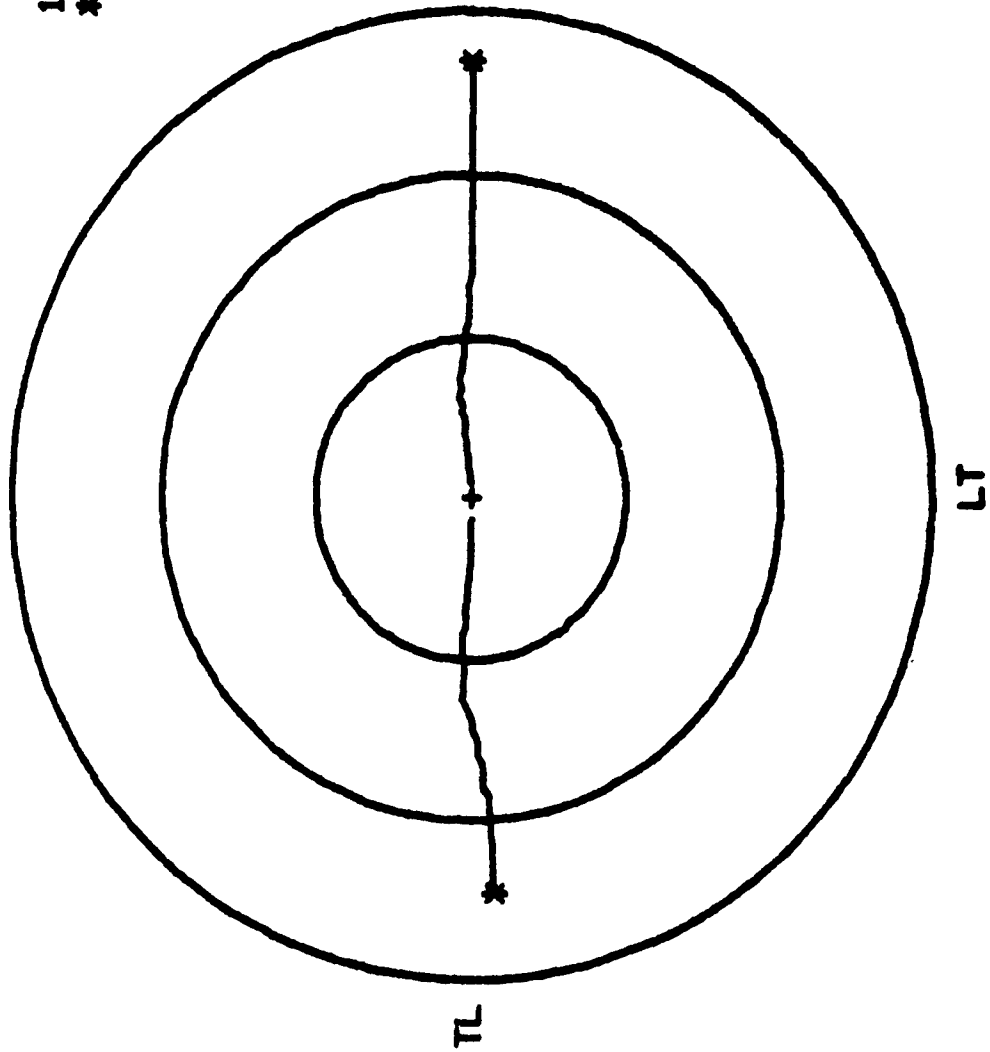
TEST CASE 61



SPECIMEN 2-20

TEST CASE 61

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 65 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-9 FLAW TYPE - 1

TEMP = 79 F REL HUM = 45 % 08/26/77

B = 176 IN R(L) = .1 R(T) = .1

FREQ = 2 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 5

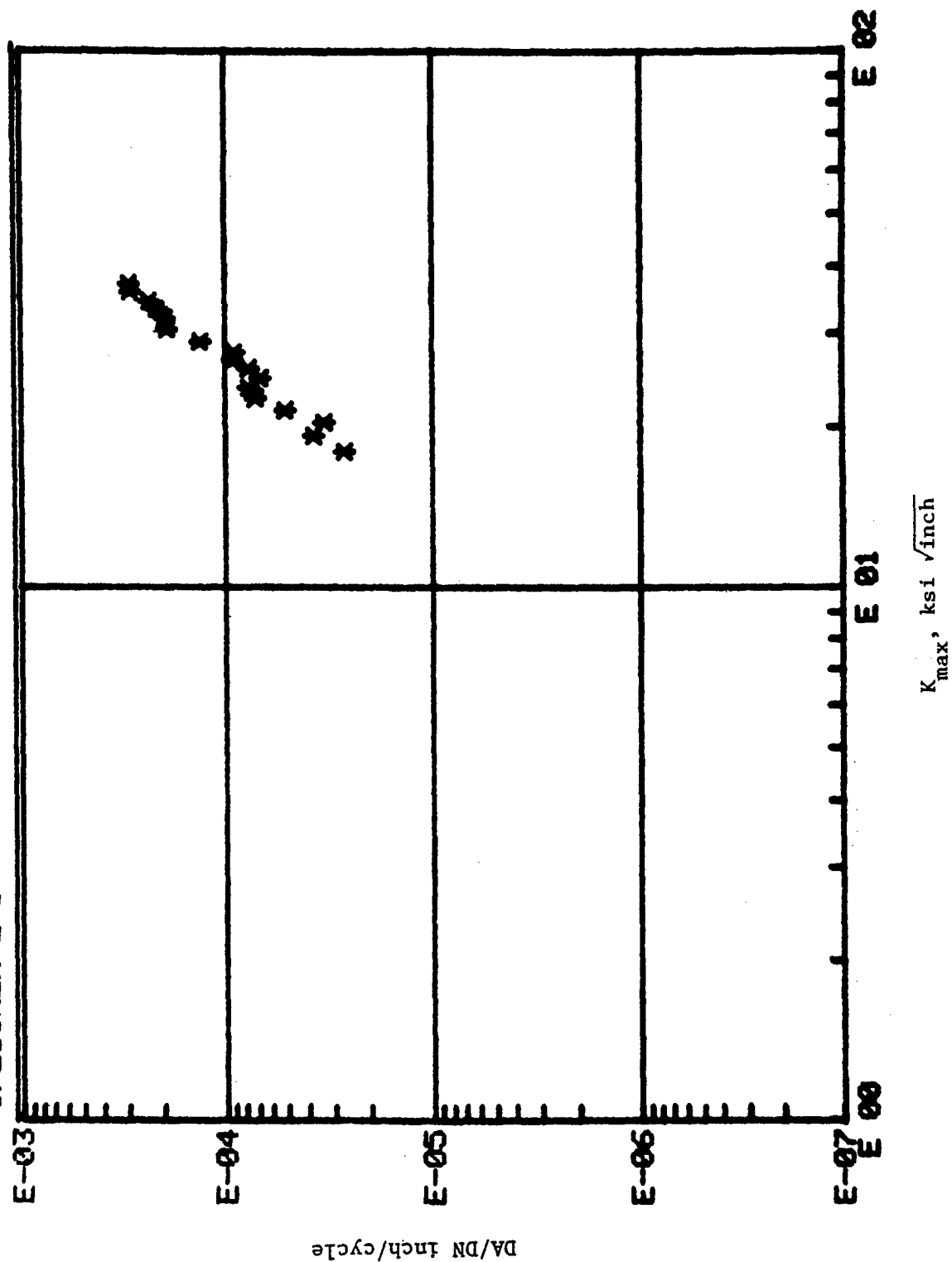
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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	55.75	37.68	0	3	3	187	3
2	55.75	37.68	1135	3.5	3.7	188	4
3	55.75	37.68	1672	4	4	190	5
4	55.75	37.68	2421	4.5	4.5	189	6
5	55.75	37.68	2918	5	5	188	8
6	55.75	37.68	3265	5.5	5.5	188	7
7	55.75	37.68	3594	6	6	188	7
8	55.75	37.68	4005	6.5	6.6	187	7
9	55.75	37.68	4295	7	7	187	7
10	55.75	37.68	4567	7.5	7.5	187	7
11	55.75	37.68	4844	8	8	187	7
12	55.75	37.68	5227	9	9	187	8
13	55.75	37.68	5479	10	9.9	186	8
14	55.75	37.68	5711	11	10.7	186	7
15	55.75	37.68	5899	12	11.3	186	7
16	55.75	37.68	6093	13	12.1	185	7
17	55.75	37.68	6258	14	13	185	7
18	55.75	37.68	6405	15	13.7	185	9



# TEST CASE 63

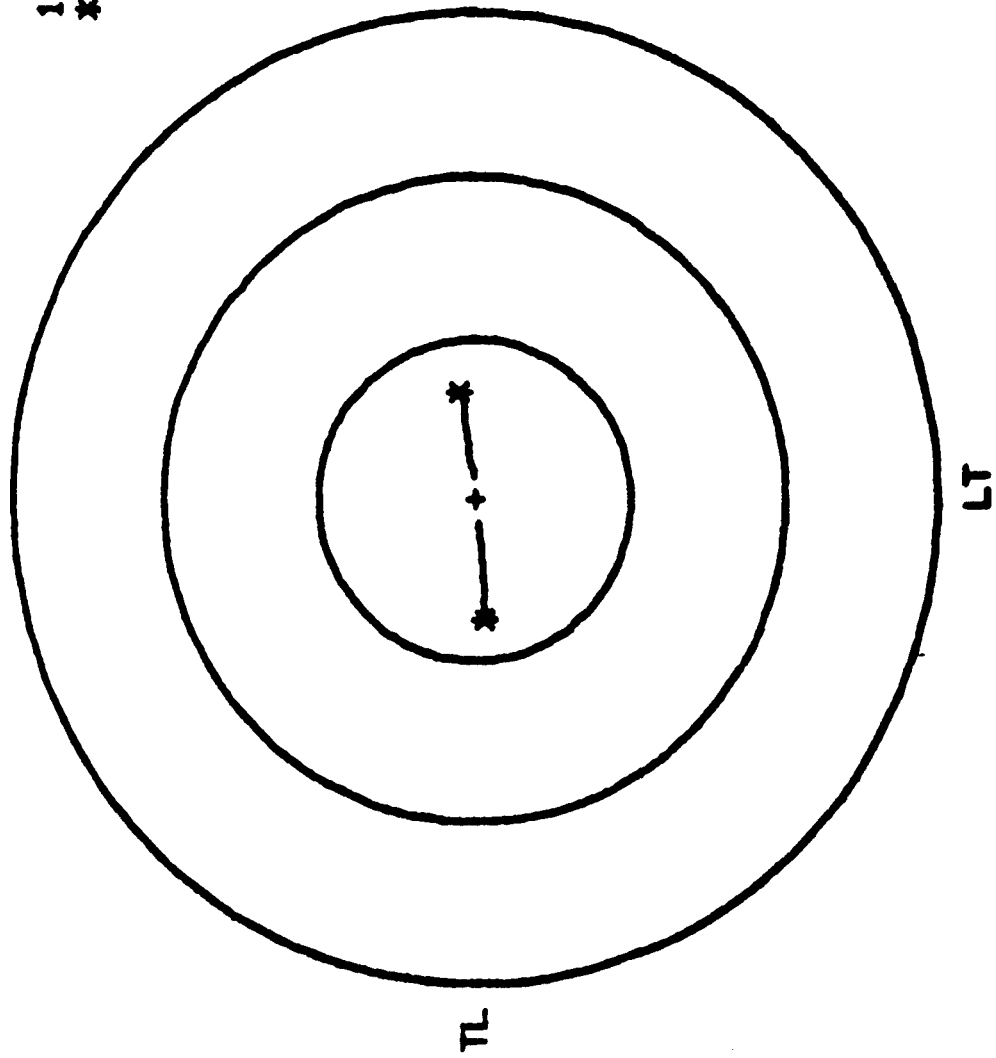
SPECIMEN 2-9



SPECIMEN 2-9

TEST CASE 63

1 IN SPACING  
\* TEST STOPPED

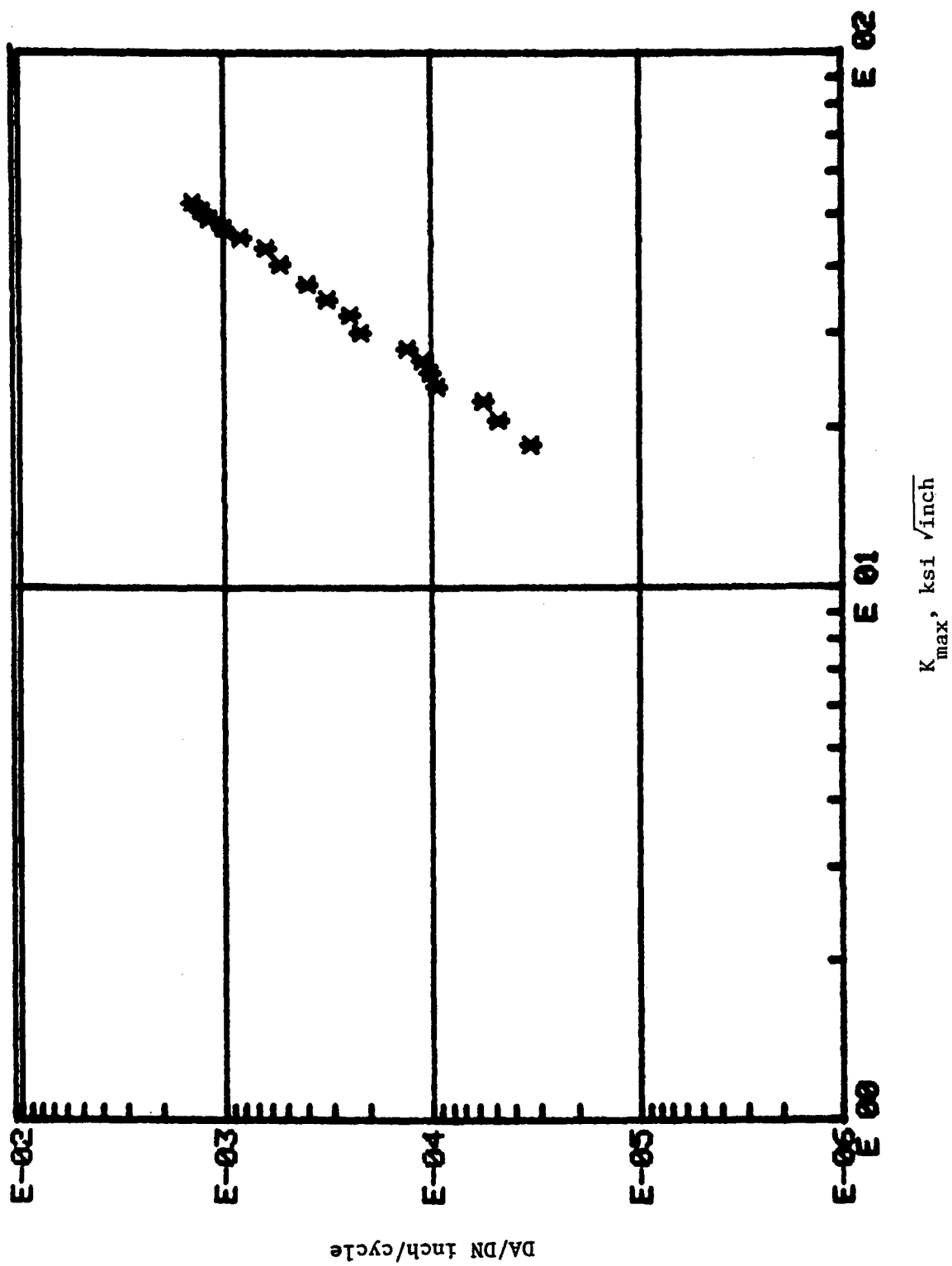


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CRACK GROWTH TEST OF 2024-T3 TEST CASE 138 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC 2-26 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 48 % 12/19/77  
B = .168 IN R(L) = .1 R(T) = .1  
FREQ = 2 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	66.9	45.22	0	2.5	1.9	181	-4
2	66.9	45.22	829	3	2.5	184	-6
3	66.9	45.22	1409	3.6	3	184	-7
4	66.9	45.22	1850	4	3.6	185	-7
5	66.9	45.22	2115	4.6	4	186	-7
6	66.9	45.22	2360	5	4.6	187	-7
7	66.9	45.22	2565	5.5	5	187	-7
8	66.9	45.22	2814	6	5.8	187	-8
9	66.9	45.22	3041	7	6.8	188	-8
10	66.9	45.22	3265	8	8	188	-8
11	66.9	45.22	3445	9	9.3	188	-7
12	66.9	45.22	3590	10	10.6	188	-6
13	66.9	45.22	3810	12	13.3	187	-5
14	66.9	45.22	3907	13	14.7	187	-5
15	66.9	45.22	3986	14	16.3	187	-4
16	66.9	45.22	4054	15	18	187	-4
17	66.9	45.22	4101	16	19.2	188	-4
18	66.9	45.22	4154	17	20.9	188	-4
19	66.9	45.22	4195	18	22.2	188	-3

SPECIMEN 2-26

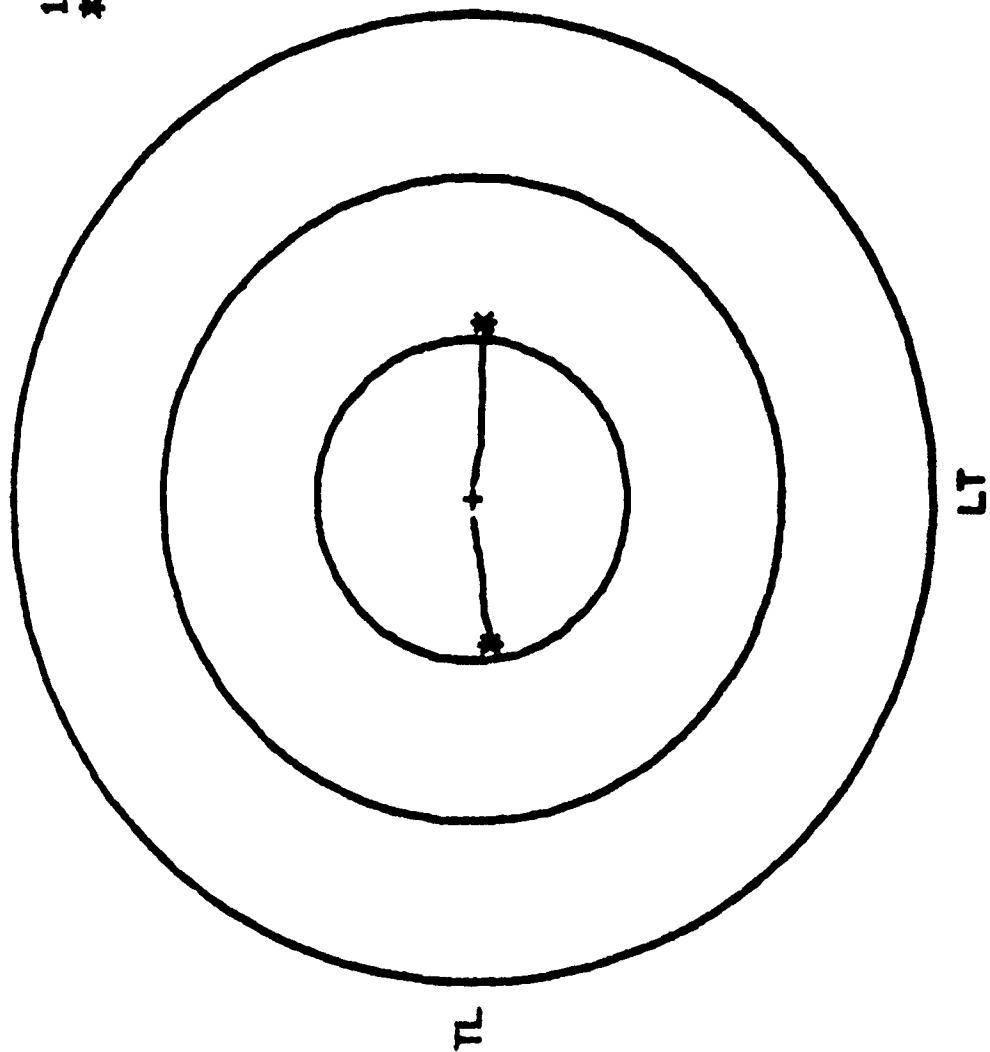
TEST CASE 138



SPECIMEN 2-26

TEST CASE 138

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 134 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-17 FLAW TYPE - 1

TEMP = 75 F REL HUM = 30 % 08/01/77

B = .176 IN R(L) = .1 R(T) = .1

FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 1

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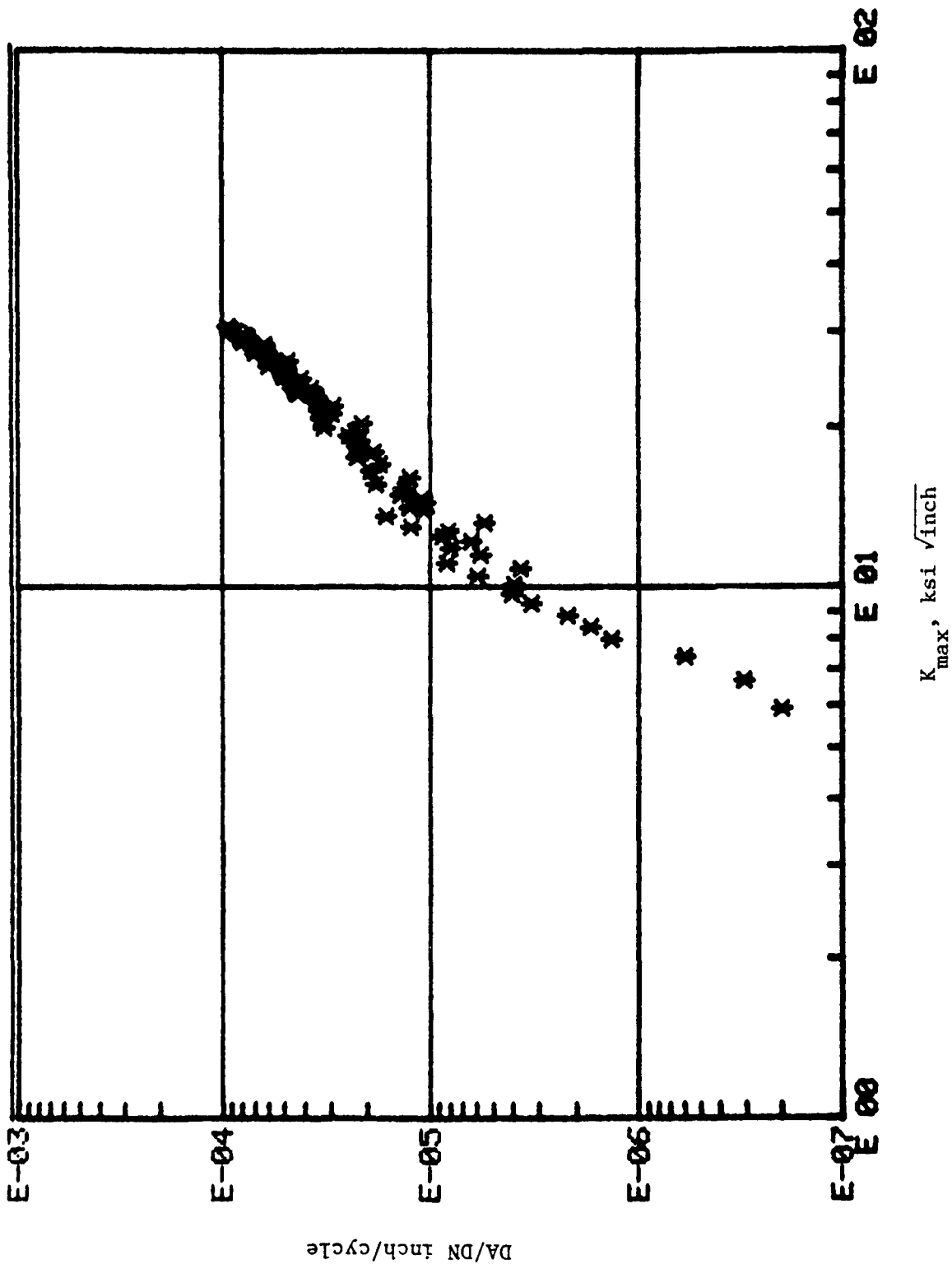
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	24.9	24.9	0	2	1.9	180	0
2	24.9	24.9	150680	2.5	2.6	181	0
3	24.9	24.9	248630	3	3.3	183	1
4	24.9	24.9	307170	3.5	4.2	184	2
5	24.9	24.9	323860	4	4.6	185	3
6	24.9	24.9	337100	4.5	5	185	4
7	24.9	24.9	349660	5	5.6	186	4
8	24.9	24.9	357290	5.5	6.1	187	5
9	24.9	24.9	364060	6	6.7	189	5
10	24.9	24.9	369770	6.5	7.1	190	6
11	24.9	24.9	374010	7	7.6	191	7
12	24.9	24.9	379460	7.5	7.9	191	7
13	24.9	24.9	382770	8	8.5	192	9
14	24.9	24.9	387140	8.5	9	192	10
15	24.9	24.9	390580	9	9.6	192	10
16	24.9	24.9	394540	9.6	10	192	11
17	24.9	24.9	397150	10	10.5	193	11
18	24.9	24.9	400200	10.5	11	193	12
19	24.9	24.9	401620	11	11.2	193	12
20	24.9	24.9	405250	11.5	11.5	193	12
21	24.9	24.9	407570	12	12.5	193	12
22	24.9	24.9	409890	12.5	13	193	12
23	24.9	24.9	411690	13	13.4	194	12
24	24.9	24.9	414060	13.5	13.9	193	12
25	24.9	24.9	415860	14	14.2	193	13
26	24.9	24.9	418020	14.5	14.9	194	13
27	24.9	24.9	419720	15	15.3	196	13
28	24.9	24.9	422620	16	16.4	196	15
29	24.9	24.9	426210	17	17.2	196	15
30	24.9	24.9	428820	18	18.2	196	15
31	24.9	24.9	431990	19	19.4	196	15
32	24.9	24.9	434320	20	20.5	196	15
33	24.9	24.9	436870	21	21.4	196	16
34	24.9	24.9	438980	22	22.3	196	16
35	24.9	24.9	441360	23	23.4	196	17
36	24.9	24.9	443510	24	24.5	197	17
37	24.9	24.9	445150	25	25	197	17
38	24.9	24.9	446690	26	26	197	17
39	24.9	24.9	449020	27	27	197	17
40	24.9	24.9	450530	28	28	197	18
41	24.9	24.9	452210	29	29	198	19
42	24.9	24.9	454250	30.2	30.6	198	19
43	24.9	24.9	455540	31	31.3	198	19
44	24.9	24.9	456900	32	32.2	198	19
45	24.9	24.9	458540	33	33.5	198	20
46	24.9	24.9	459820	34.1	34.6	198	20
47	24.9	24.9	460730	35	35.3	199	20
48	24.9	24.9	462000	36	36.2	199	20
49	24.9	24.9	463230	37	37.3	199	20
50	24.9	24.9	464250	38	38.2	199	21



REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	24.9	24.9	465500	39	39.3	200	21
52	24.9	24.9	466450	40	40.2	200	23
53	24.9	24.9	467430	41	41.2	200	23
54	24.9	24.9	468500	42	42.3	200	23
55	24.9	24.9	469460	43	43.6	200	23
56	24.9	24.9	470650	44	45	200	23
57	24.9	24.9	471530	45	45.7	201	23
58	24.9	24.9	472510	46	47	201	23
59	24.9	24.9	473280	47	47.9	201	23
60	24.9	24.9	473970	48	48.8	201	24
61	24.9	24.9	474640	49	49.5	202	24
62	24.9	24.9	475390	50	50.6	203	24
63	24.9	24.9	476070	51	51.3	203	24
64	24.9	24.9	476830	52	52.2	203	25
65	24.9	24.9	477430	53	53.1	203	25
66	24.9	24.9	478070	54	54.2	203	25
67	24.9	24.9	478840	55	55.5	204	26
68	24.9	24.9	479320	56	56	204	26
69	24.9	24.9	479950	57	57.1	204	26
70	24.9	24.9	480500	58	58	203	26
71	24.9	24.9	480990	59	58.8	204	26
72	24.9	24.9	481550	60	59.9	205	26

SPECIMEN 2-17

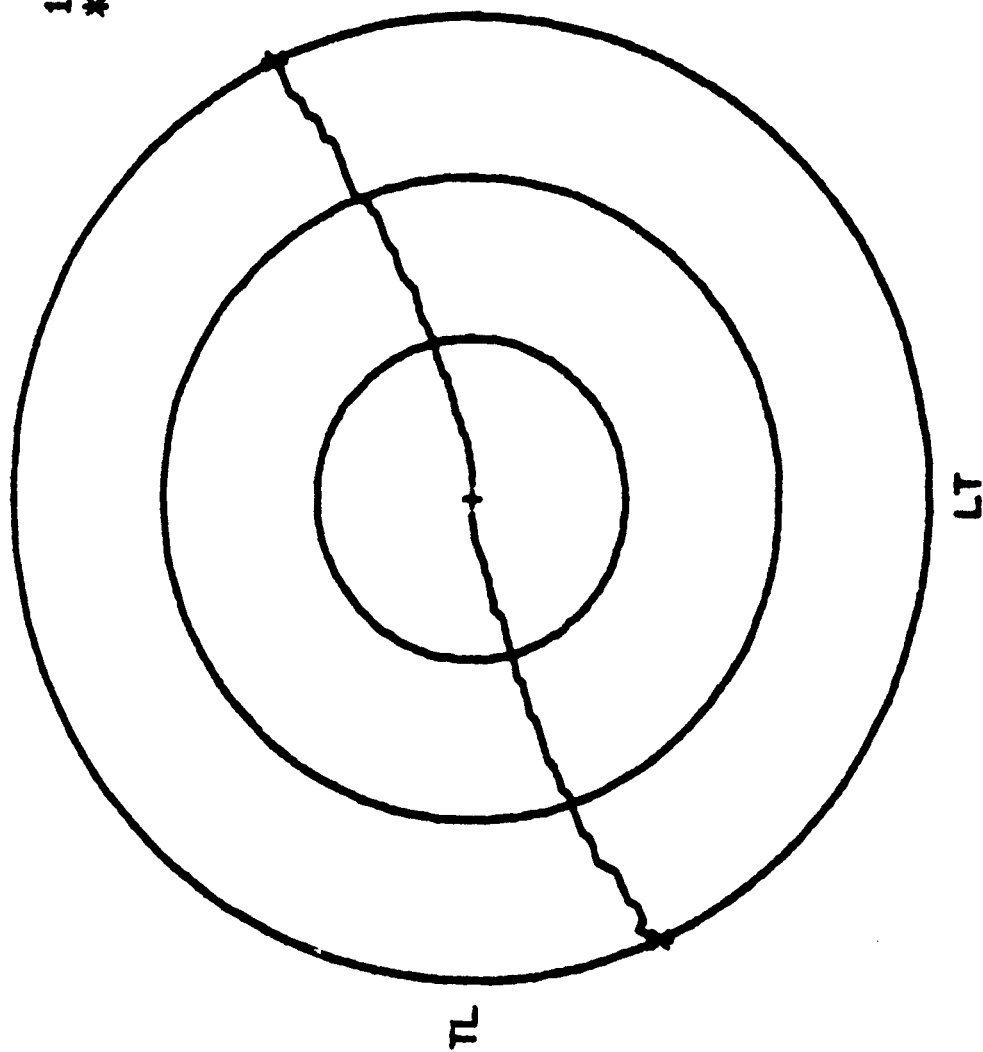
TEST CASE 134



SPECIMEN 2-17

TEST CASE 134

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 2024-T3 TEST CASE 31 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-43 FLAW TYPE - 1

TEMP = 76 F REL HUM = 54 % 5-23-78

B = .182 IN R(L) = .1 R(T) = .1

FREQ = 8 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

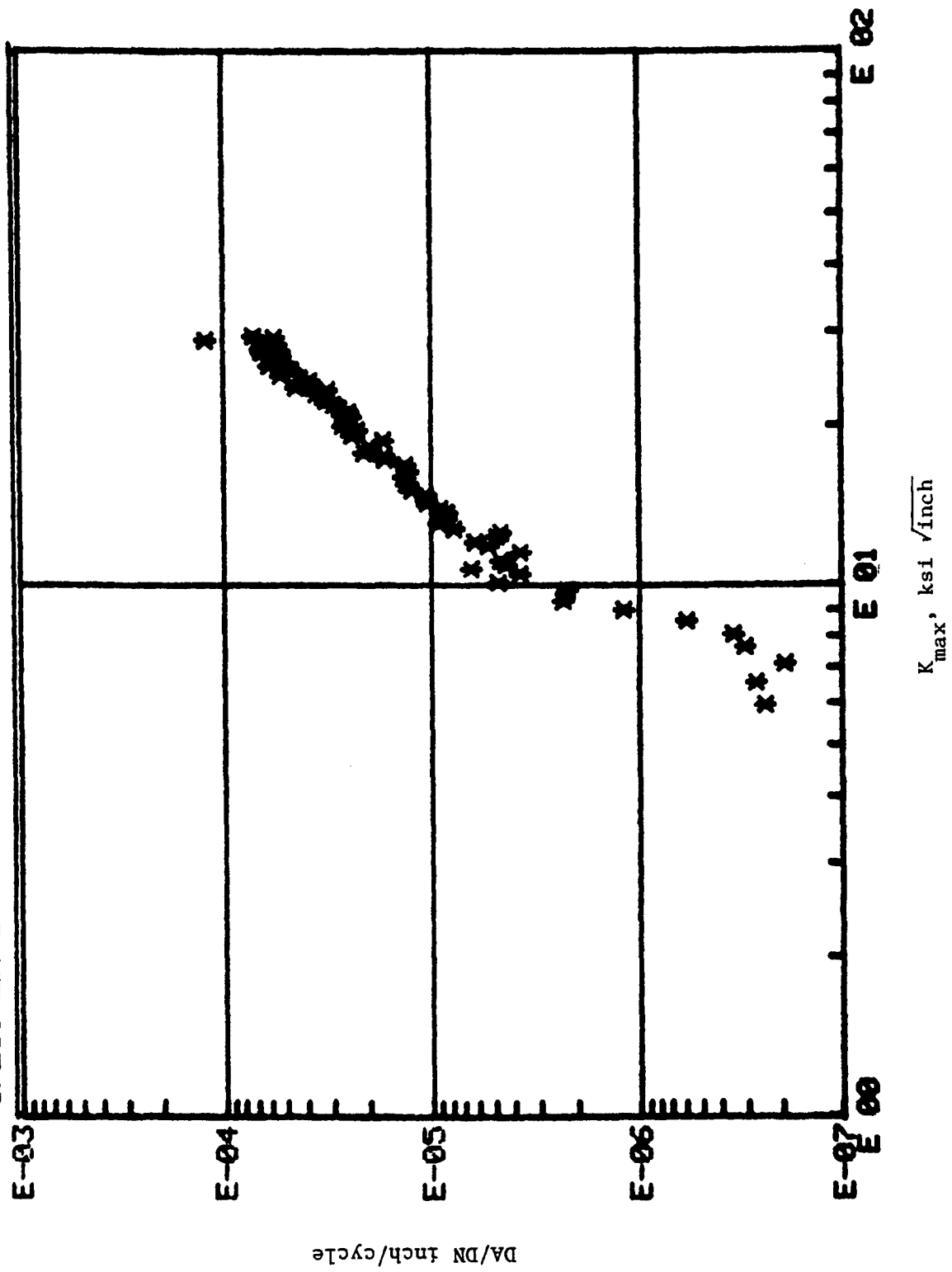
BIAXIAL RATIO = 1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	24.9	24.9	0	2	2.1	180	2
2	24.9	24.9	91740	2.5	2.5	181	2
3	24.9	24.9	185040	3	3	183	3
4	24.9	24.9	313910	3.5	3.5	183	3
5	24.9	24.9	395070	4	4	184	4
6	24.9	24.9	452530	4.5	4.3	185	5
7	24.9	24.9	503060	5.2	4.8	186	7
8	24.9	24.9	515640	5.5	5.1	186	8
9	24.9	24.9	528550	6	5.8	187	8
10	24.9	24.9	538620	6.5	6.2	187	9
11	24.9	24.9	542810	7	6.5	187	9
12	24.9	24.9	549520	7.5	7	187	9
13	24.9	24.9	551480	7.8	7.2	187	8
14	24.9	24.9	553760	8	7.4	188	8
15	24.9	24.9	559130	8.5	7.9	187	7
16	24.9	24.9	567850	9	8.7	187	6
17	24.9	24.9	571620	9.5	9	185	6
18	24.9	24.9	574070	10	9.1	184	5
19	24.9	24.9	578710	10.2	9.8	184	4
20	24.9	24.9	581410	10.5	10	184	4
21	24.9	24.9	584980	11	10.6	185	4
22	24.9	24.9	587710	11.5	11.1	185	5
23	24.9	24.9	590660	12	11.6	185	5
24	24.9	24.9	593340	12.5	12	185	6
25	24.9	24.9	596370	13	12.6	185	6
26	24.9	24.9	598520	13.5	13	185	7
27	24.9	24.9	601110	14	13.6	186	7
28	24.9	24.9	603710	14.5	14.2	186	8
29	24.9	24.9	605740	15	14.7	186	8
30	24.9	24.9	610100	16.2	15.8	186	9
31	24.9	24.9	613270	17	16.7	186	9
32	24.9	24.9	616750	18	17.5	187	10
33	24.9	24.9	620690	19	18.6	187	10
34	24.9	24.9	623220	20	19.3	188	10
35	24.9	24.9	624120	20.3	19.6	188	10
36	24.9	24.9	625780	21	20.3	188	10
37	24.9	24.9	628740	22	21.6	188	10
38	24.9	24.9	632270	23	23	188	10
39	24.9	24.9	634360	24	24	189	10
40	24.9	24.9	636920	25	25.3	189	11
41	24.9	24.9	638630	26	26.1	189	11
42	24.9	24.9	640580	27	27.1	189	11
43	24.9	24.9	642530	28	28	189	11
44	24.9	24.9	644720	29.1	29.1	189	11
45	24.9	24.9	646360	30	30	190	11
46	24.9	24.9	648250	31	31.2	191	11
47	24.9	24.9	650290	32.2	32.6	191	12
48	24.9	24.9	651190	33	33	192	12
49	24.9	24.9	653150	34.3	34.5	192	12
50	24.9	24.9	654190	35	35.1	193	12

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	24.9	24.9	655440	36	36.3	194	12
52	24.9	24.9	656590	37	37.1	194	12
53	24.9	24.9	657900	38	38.1	195	12
54	24.9	24.9	659140	39	39.2	195	13
55	24.9	24.9	660100	40	40.2	195	13
56	24.9	24.9	661050	41	41	196	13
57	24.9	24.9	662120	42	42	197	13
58	24.9	24.9	663080	43	43.3	197	14
59	24.9	24.9	664360	44	44.9	197	14
60	24.9	24.9	665200	45	45.8	197	14
61	24.9	24.9	666050	46	46.6	197	14
62	24.9	24.9	666990	47	47.8	196	14
63	24.9	24.9	667530	48	48.2	196	14
64	24.9	24.9	668380	49	49	196	14
65	24.9	24.9	669150	50	50	196	14
66	24.9	24.9	670030	51	51	197	15
67	24.9	24.9	670800	52	51.9	197	15
68	24.9	24.9	671590	53	52.9	198	15
69	24.9	24.9	672020	54	54	198	15
70	24.9	24.9	672820	55	54.8	199	15
71	24.9	24.9	673530	56	55.8	199	15

# TEST CASE 31

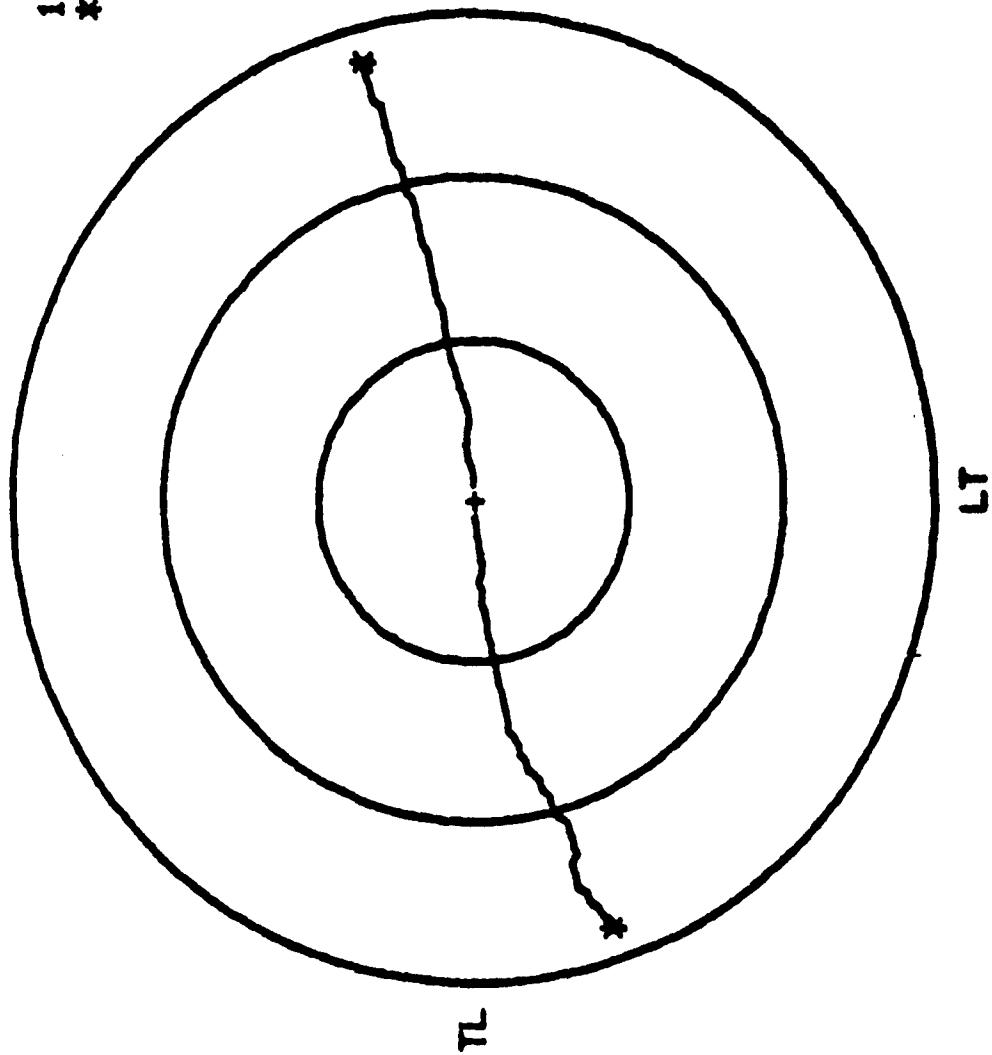
SPECIMEN 2-43



SPECIMEN 2-43

TEST CASE 31

1 IN SPACING  
\* TEST STOPPED





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CRACK GROWTH TEST OF 2024-T3 TEST CASE 32 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-32 FLAW TYPE - 1

TEMP = 77 F REL HUM = 49 % 05/31/77

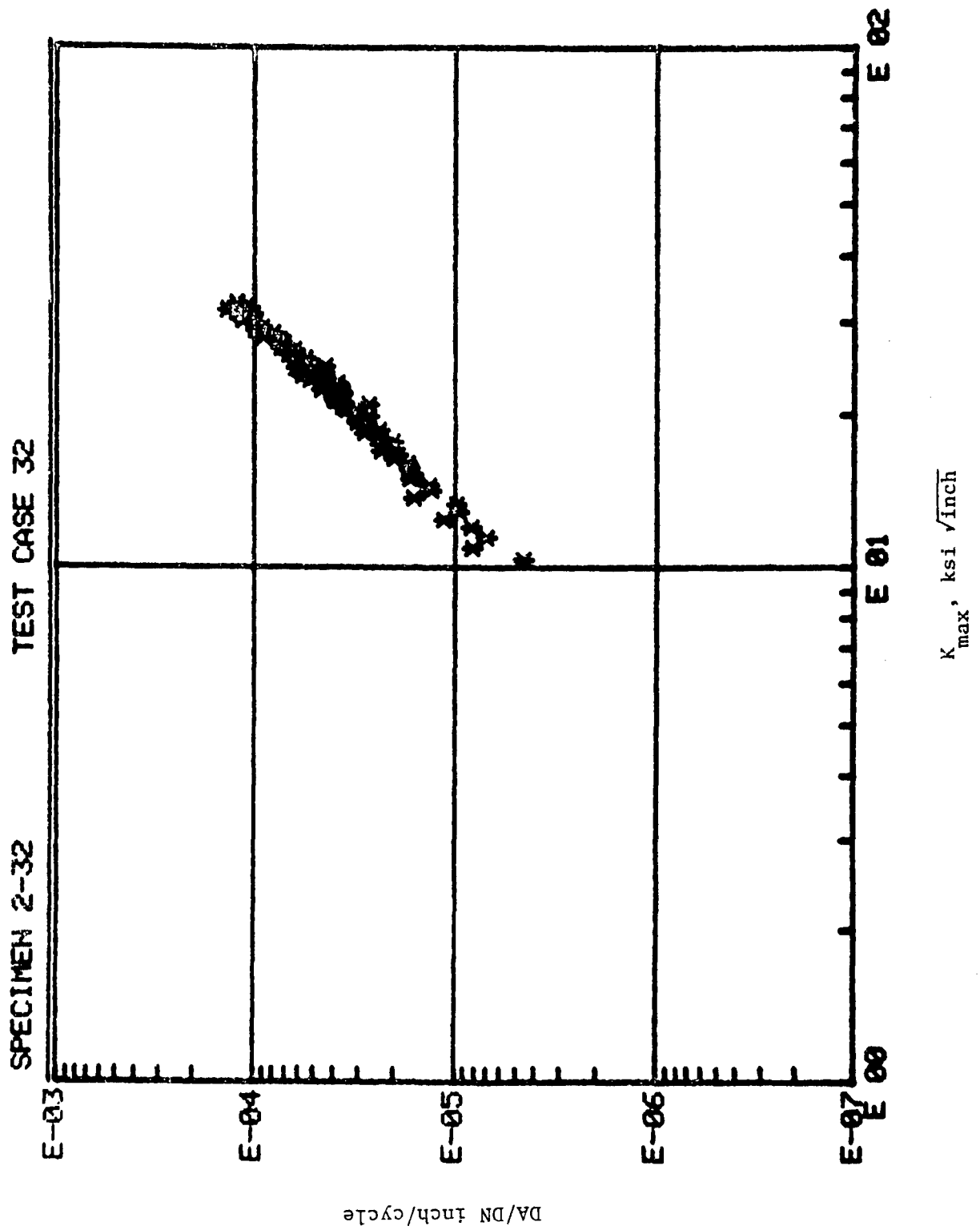
B = .181 IN R(L) = .1 R(T) = .1

FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 1  
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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	30	30	0	3.5	5.6	145	-23
2	30	30	4970	4	6	145	-24
3	30	30	8620	4.5	6.7	145	-24
4	30	30	12550	5	7.3	145	-24
5	30	30	15580	5.5	7.8	145	-24
6	30	30	17780	6	8.3	145	-25
7	30	30	20390	6.5	8.8	145	-25
8	30	30	22940	7	9.3	145	-26
9	30	30	24490	7.5	9.8	145	-26
10	30	30	26600	8	10.4	145	-27
11	30	30	28460	8.5	10.9	145	-27
12	30	30	29960	9	11.4	146	-27
13	30	30	31340	9.5	11.8	146	-27
14	30	30	32970	10	12.4	146	-27
15	30	30	34270	10.5	12.8	146	-27
16	30	30	35520	11	13.3	146	-28
17	30	30	36820	11.5	13.8	146	-28
18	30	30	37790	12	14.2	146	-28
19	30	30	39040	12.5	14.8	146	-28
20	30	30	40270	13	15.3	146	-28
21	30	30	41400	13.5	15.9	145	-28
22	30	30	42470	14	16.6	145	-29
23	30	30	43310	14.5	16.9	145	-29
24	30	30	44220	15	17.4	146	-29
25	30	30	45040	15.5	17.9	146	-29
26	30	30	45950	16	18.5	146	-29
27	30	30	46790	16.5	18.9	146	-29
28	30	30	47730	17	19.6	146	-31
29	30	30	48310	17.5	19.9	146	-31
30	30	30	49070	18	20.5	146	-31
31	30	30	50010	18.5	21	146	-30
32	30	30	50770	19	21.7	146	-31
33	30	30	51330	19.5	22.1	146	-31
34	30	30	51940	20	22.5	146	-31
35	30	30	52770	20.5	23.2	146	-30
36	30	30	53420	21	23.9	146	-30
37	30	30	54110	21.5	24.5	146	-31
38	30	30	54760	22	25	146	-31
39	30	30	55220	22.5	25.3	146	-31
40	30	30	55650	23	25.7	146	-31
41	30	30	56210	23.5	26.2	146	-31
42	30	30	56650	24	26.7	146	-31
43	30	30	57260	24.5	27.3	146	-31
44	30	30	57750	25	27.8	146	-31
45	30	30	58240	25.5	28.5	146	-31
46	30	30	58750	26	28.9	146	-31
47	30	30	59210	26.5	29.5	146	-31
48	30	30	59620	27	30	146	-31
49	30	30	60560	28	31.1	146	-32
50	30	30	61270	29	32	145	-32

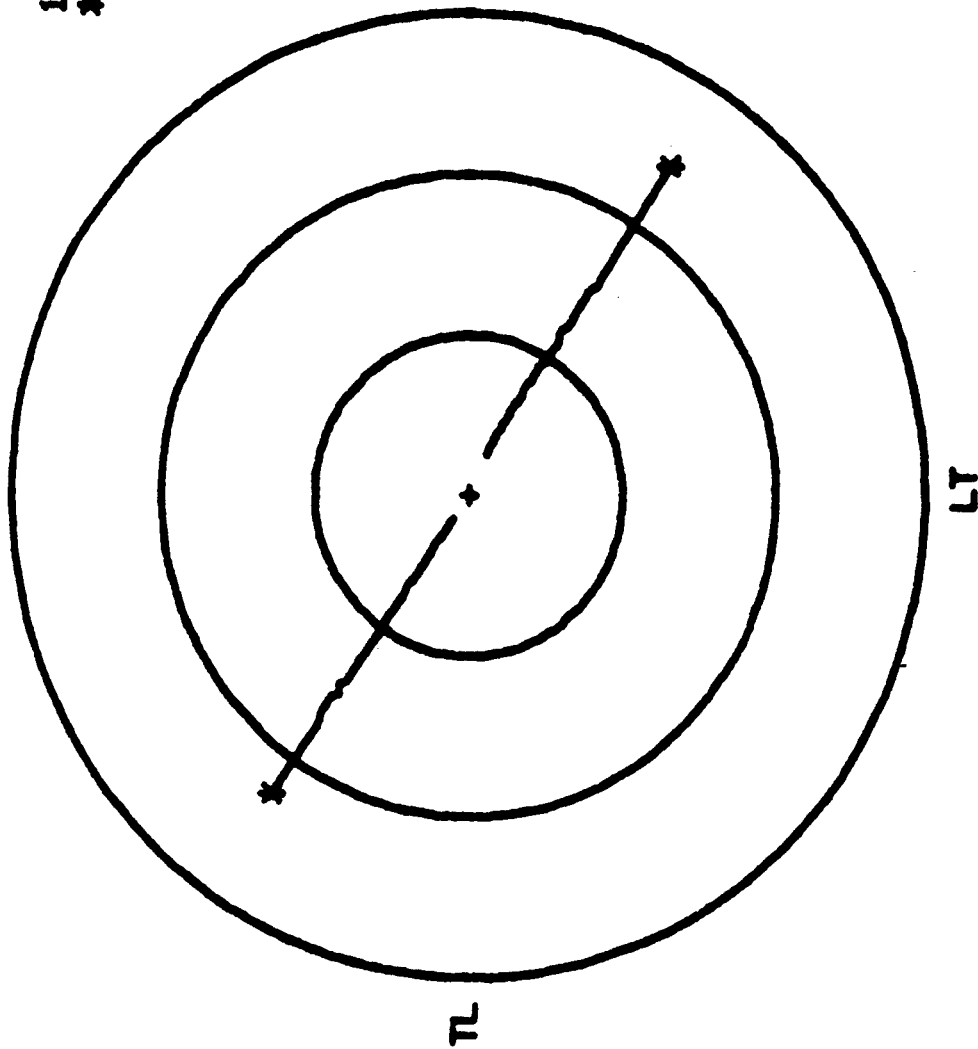
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	30	30	62020	30	32.9	146	-32
52	30	30	62710	31	33.9	145	-32
53	30	30	63490	32	35.1	145	-32
54	30	30	64100	33	35.9	145	-32
55	30	30	64710	34	37.1	146	-32
56	30	30	65360	35	38.2	146	-32
57	30	30	65820	36	39	146	-32
58	30	30	66390	37	40.1	146	-32
59	30	30	66970	38	41.4	146	-32
60	30	30	67410	39	42.4	146	-32
61	30	30	67850	40	43.4	146	-32
62	30	30	68370	41	44.5	146	-32
63	30	30	68740	42	45.3	146	-32
64	30	30	69110	43	46.3	146	-32
65	30	30	69610	44	47.5	146	-32
66	30	30	70080	45	48.8	146	-32



SPECIMEN 2-32

TEST CASE 32

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 2024-T3 TEST CASE 59 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC 2-5 FLAW TYPE - 1

TEMP = 74 F REL HUM = 57 % 2-6-78

B = .177 IN R(L) = .1 R(T) = .1

FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 1

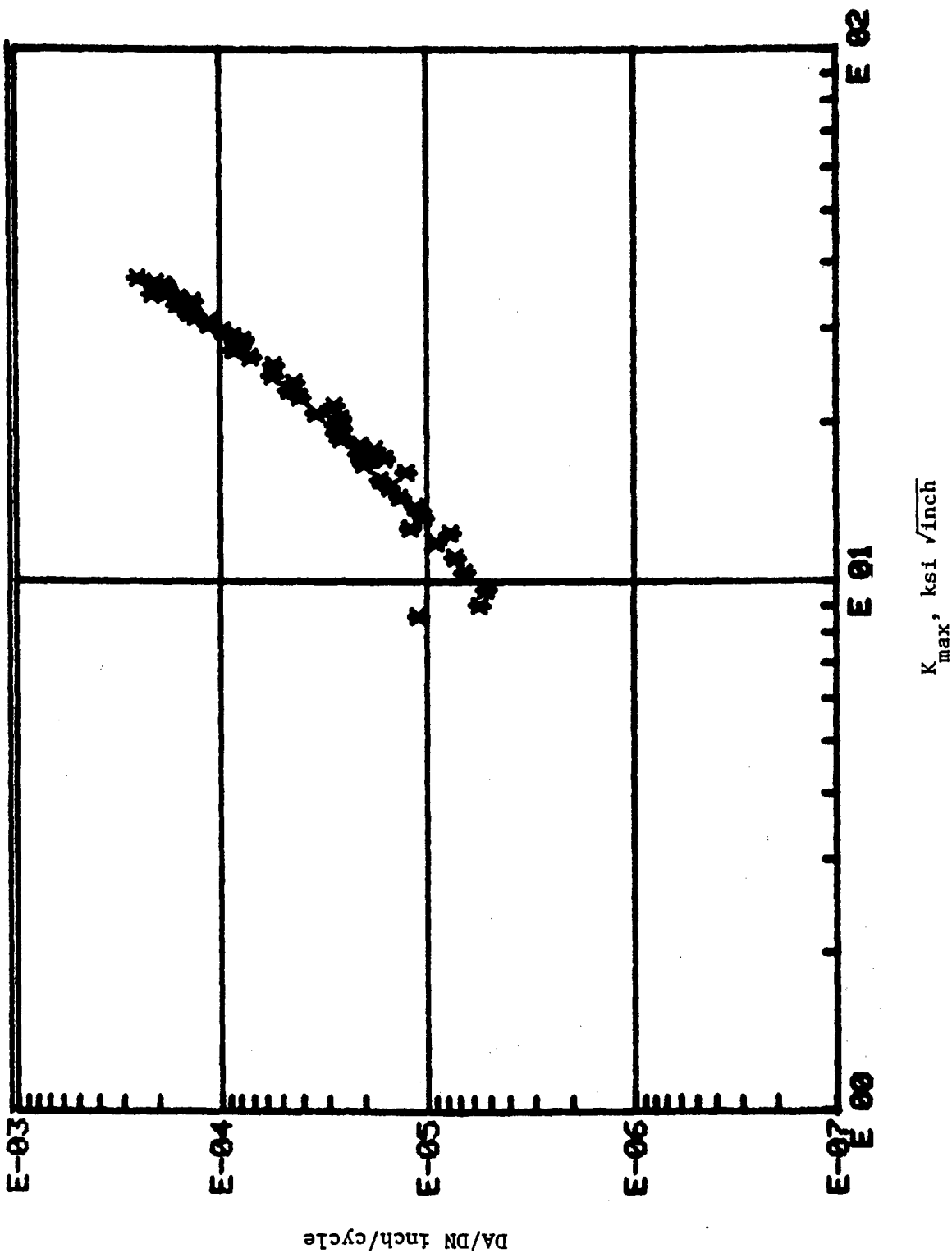
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	37.34	37.34	0	2	2	194	0
2	37.34	37.34	910	2.2	2.2	193	0
3	37.34	37.34	3160	2.5	2.4	192	0
4	37.34	37.34	7040	3	2.7	190	0
5	37.34	37.34	10450	3.5	3.1	189	0
6	37.34	37.34	13530	4	3.5	188	0
7	37.34	37.34	16550	4.5	4.1	188	0
8	37.34	37.34	17200	4.7	4.1	188	0
9	37.34	37.34	18650	5	4.5	189	0
10	37.34	37.34	21050	5.5	5	188	0
11	37.34	37.34	23030	6	5.4	187	0
12	37.34	37.34	24080	6.5	5.9	187	0
13	37.34	37.34	26360	7	6.3	187	0
14	37.34	37.34	28000	7.5	6.9	187	0
15	37.34	37.34	29590	8	7.2	187	0
16	37.34	37.34	31080	8.5	7.9	187	0
17	37.34	37.34	32020	9	8	187	0
18	37.34	37.34	32720	9.1	8.5	186	0
19	37.34	37.34	33560	9.5	8.7	186	0
20	37.34	37.34	34630	10	9.1	186	0
21	37.34	37.34	35790	10.6	9.7	187	0
22	37.34	37.34	36530	11	10.1	188	0
23	37.34	37.34	37410	11.5	10.5	188	0
24	37.34	37.34	38320	12	11	188	0
25	37.34	37.34	39280	12.5	11.5	188	0
26	37.34	37.34	40230	13.1	12.2	188	0
27	37.34	37.34	41840	14	13.1	189	0
28	37.34	37.34	43000	15	14	190	0
29	37.34	37.34	44080	16	15	191	0
30	37.34	37.34	45230	17	16	192	0
31	37.34	37.34	46170	18	17.1	192	0
32	37.34	37.34	47950	20	19	193	1
33	37.34	37.34	48660	21	20	193	1
34	37.34	37.34	49280	22.1	21	194	2
35	37.34	37.34	49880	23	22	194	2
36	37.34	37.34	50530	24	23	194	2
37	37.34	37.34	51110	25	24	194	2
38	37.34	37.34	51730	26.2	25.2	195	2
39	37.34	37.34	52240	27.3	26.4	195	3
40	37.34	37.34	52530	28	27	195	3
41	37.34	37.34	52950	29	28.2	195	3
42	37.34	37.34	53360	30.3	29.2	195	3
43	37.34	37.34	53620	31	30	195	3
44	37.34	37.34	54030	32.3	31.3	195	3
45	37.34	37.34	54310	33	32.1	195	4
46	37.34	37.34	54610	34	33	195	4
47	37.34	37.34	54880	35	34.3	194	4
48	37.34	37.34	55120	36	35	194	4
49	37.34	37.34	55480	37	36	194	4
50	37.34	37.34	55670	38	37	194	5

REF	P(L)	P(T)	TOTAL	GRID	GRID	ANGLE	ANGLE
#	KIPS	KIPS	CYCLES	LEFT	RIGHT	LEFT	RIGHT
51	37.34	37.34	55940	39	38.2	194	5
52	37.34	37.34	56140	40	39.2	194	5



SPECIMEN 2-5

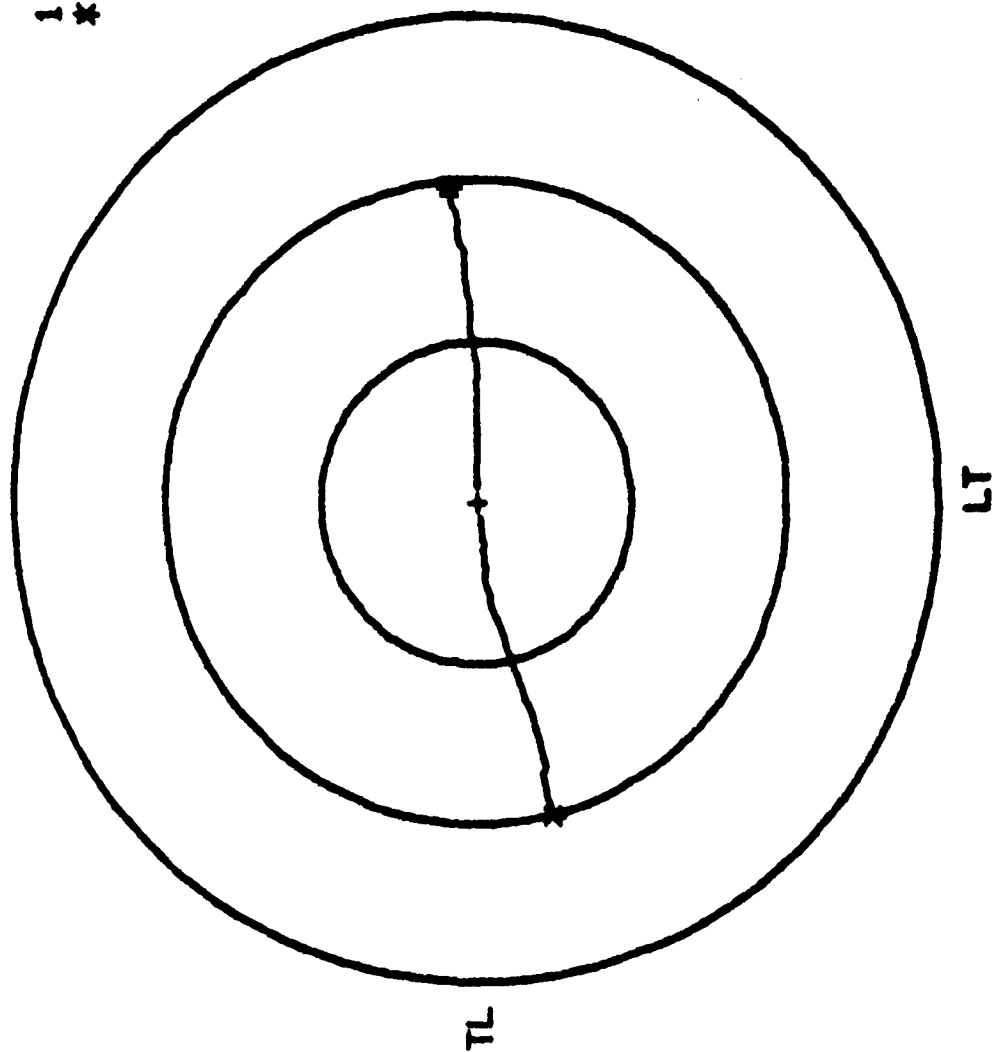
TEST CASE 59



SPECIMEN 2-5

TEST CASE 59

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3

SPEC LT-2-1

CCT SPECIMEN TYPE

TEST CASE 3

TEMP = 76 F

REL HUM = 47 %

4-8-77

W = 7.011 IN

B = .182 IN

R = .1

FREQUENCY = 5 HZ

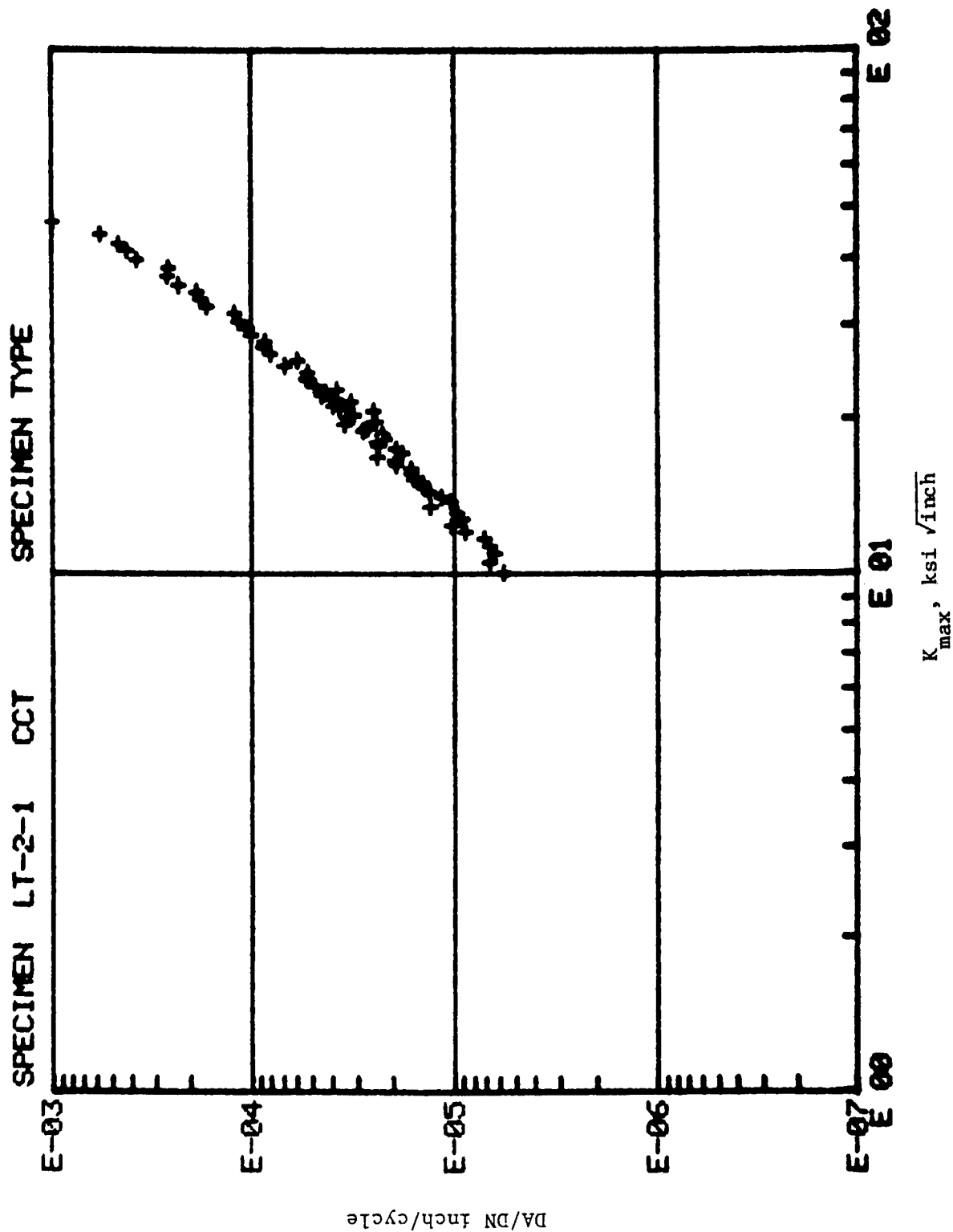
LAB AIR ENVIRONMENT

GRID SPACING = .05 IN

FILE CODE: \$LT21  
-----

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	13	0	5.5	7	5.6	6.1
2	13	5920	6	7.5	6.6	6.8
3	13	9660	6.5	8.1	7	7.3
4	13	14370	7	8.7	7.7	7.9
5	13	17750	7.5	9	8.1	8.5
6	13	21630	8	9.6	8.7	9
7	13	24050	8.5	10	9.1	9.4
8	13	26720	9	10.6	9.7	9.9
9	13	29440	9.5	11	10.2	10.5
10	13	32780	10	11.7	10.9	11.2
11	13	34590	10.5	12.2	11.3	11.7
12	13	36750	11	12.8	11.7	12
13	13	38590	11.5	13	12.1	12.6
14	13	40480	12	13.6	12.6	13
15	13	42170	12.5	14.1	13	13.5
16	13	44090	13	14.6	13.6	14.1
17	13	45600	13.5	15	14.1	14.6
18	13	47530	14	15.9	14.7	15.1
19	13	49220	14.5	16.3	15.3	15.8
20	13	50380	15	16.8	15.6	16.3
21	13	51470	15.5	17.2	16	16.7
22	13	52570	16	17.9	16.6	17
23	13	53760	16.5	18.2	16.9	17.6
24	13	55260	17	18.6	17.7	18.2
25	13	56380	17.5	19.1	18.2	18.8
26	13	57370	18	19.5	18.8	19.2
27	13	58340	18.5	20	19	19.7
28	13	59620	19	20.6	19.6	20.3
29	13	60560	19.5	21.2	20.1	20.8
30	13	61500	20	21.8	20.6	21.2
31	13	62150	20.5	22.1	21	21.8
32	13	63030	21	22.6	21.4	22.1
33	13	63990	21.5	23.3	22	22.9
34	13	64750	22	23.8	22.4	23.4
35	13	65650	22.5	24	23	23.9
36	13	66400	23	24.7	23.5	24.4
37	13	66970	23.5	25.1	24	24.8
38	13	67590	24	25.5	24.4	25.1
39	13	68410	24.5	26.1	25.1	25.8
40	13	69000	25	26.7	25.6	26.3
41	13	69610	25.5	27.2	26	27
42	13	70040	26	27.5	26.3	27.2
43	13	71230	27	28.6	27.6	28.4
44	13	72260	28	29.6	28.8	29.6
45	13	73140	29	31	29.4	30.3
46	13	74040	30	32	31	31.6
47	13	74780	31	33.1	31.4	32.6
48	13	75430	32	34.1	32.6	33.6
49	13	76150	33	35.5	33.8	35
50	13	76650	34	36.5	34.2	36

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
51	13	77190	35	37.9	35.1	37
52	13	77830	36	39.5	36.1	38.7
53	13	78320	37	40.8	37	40
54	13	78810	38	41.8	38.2	41.5
55	13	79190	39	43.2	39.5	42.8
56	13	79500	40	44.5	40.4	44
57	13	79770	41	45.6	41.2	45.1
58	13	80050	42	47	42.5	46.5
59	13	80280	43	48.4	43.7	47.7
60	13	80500	44	49.6	44.7	49
61	13	80680	45	51.2	46	50.4
62	13	80810	46	52.3	47	51.6
63	13	80910	47	53.4	47.6	52.6
64	13	81020	48	54.9	48.4	54.3
65	13	81100	49	57	49.5	56.5



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CRACK GROWTH TEST OF 2024-T3

SPEC LT-2-3

CCT SPECIMEN TYPE

TEST CASE 4

TEMP = 75 F

REL HUM = 52 %

4-11-77

W = 7.009 IN

B = .102 IN

R = .1

FREQUENCY = 5 HZ

LAB AIR ENVIRONMENT

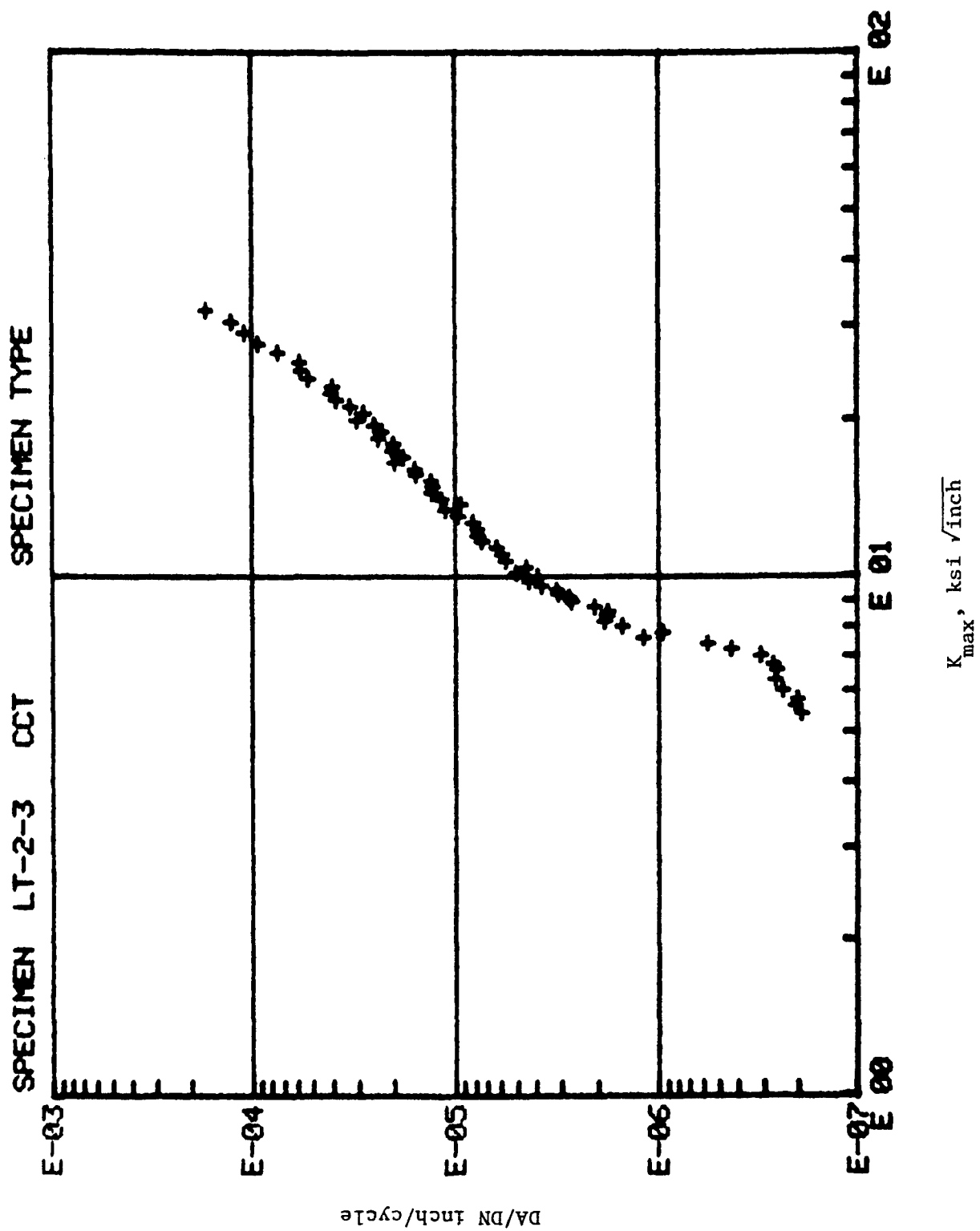
GRID SPACING = .05 IN

FILE CODE: \$LT23  
-----

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	7.5	0	5.3	6	6.2	4.2
2	7.5	116050	5.7	6.3	6.5	5
3	7.5	187820	6	6.6	6.9	5.2
4	7.5	287030	6.4	7	7.2	5.7
5	7.5	396690	7.1	7.4	7.7	6.2
6	7.5	553000	8	8.1	8.5	7.1
7	7.5	630000	8.3	8.5	9	7.5
8	7.5	718020	8.7	9	9.5	8
9	7.5	831100	9.3	9.6	10.2	8.9
10	7.5	877040	9.9	10	10.4	9.3
11	7.5	926780	10.3	10.6	11	10
12	7.5	942410	10.7	11	11.5	10.2
13	7.5	973810	11.4	11.5	12.1	10.8
14	7.5	991910	12	12	12.7	11.3
15	7.5	1.00673E+06	12.6	12.5	13.3	11.8
16	7.5	1.01790E+06	12.9	13	13.7	12.2
17	7.5	1.03277E+06	13.5	13.5	14.2	12.7
18	7.5	1.04665E+06	14	14	14.9	13.3
19	7.5	1.05600E+06	14.6	14.6	15.3	13.7
20	7.5	1.06370E+06	14.9	15	15.9	14.1
21	7.5	1.07281E+06	15.5	15.6	16.4	14.7
22	7.5	1.07983E+06	15.9	16	16.9	15.2
23	7.5	1.08707E+06	16.5	16.5	17.4	15.8
24	7.5	1.09307E+06	17.1	17	17.9	16.3
25	7.5	1.10036E+06	17.6	17.5	18.4	17.1
26	7.5	1.10460E+06	18	18	19	17.3
27	7.5	1.11604E+06	19	19	20.1	18.3
28	7.5	1.12507E+06	20.1	20	21	19.4
29	7.5	1.13401E+06	21.2	21	22.1	20.4
30	7.5	1.14206E+06	22.3	22	23	21.4
31	7.5	1.14810E+06	23	23	24	22.3
32	7.5	1.15461E+06	24	24	25.1	23.2
33	7.5	1.16079E+06	25	25	26	24.2
34	7.5	1.16716E+06	26.1	26	27.1	25.2
35	7.5	1.17291E+06	27.4	27	28.2	26.3
36	7.5	1.17740E+06	28.3	28	29.3	27.4
37	7.5	1.18238E+06	29.4	29	30.1	28.2
38	7.5	1.18665E+06	30.3	30	31.3	29.1
39	7.5	1.19122E+06	31.7	31	32.5	30.3
40	7.5	1.19538E+06	32.9	32	33.6	31.3
41	7.5	1.19835E+06	33.4	33	34.4	32.1
42	7.5	1.20186E+06	34.5	34	35.6	33.2
43	7.5	1.20525E+06	35.7	35	36.6	34.3
44	7.5	1.20764E+06	36.7	36	37.6	35.1
45	7.5	1.21041E+06	37.6	37	38.6	36.2
46	7.5	1.21297E+06	38.7	38	39.7	37.2
47	7.5	1.21570E+06	39.8	39.1	40.7	38.4
48	7.5	1.21763E+06	40.7	40	41.7	39.3
49	7.5	1.21987E+06	41.8	41	42.7	40.3
50	7.5	1.22182E+06	42.8	42	43.6	41.3



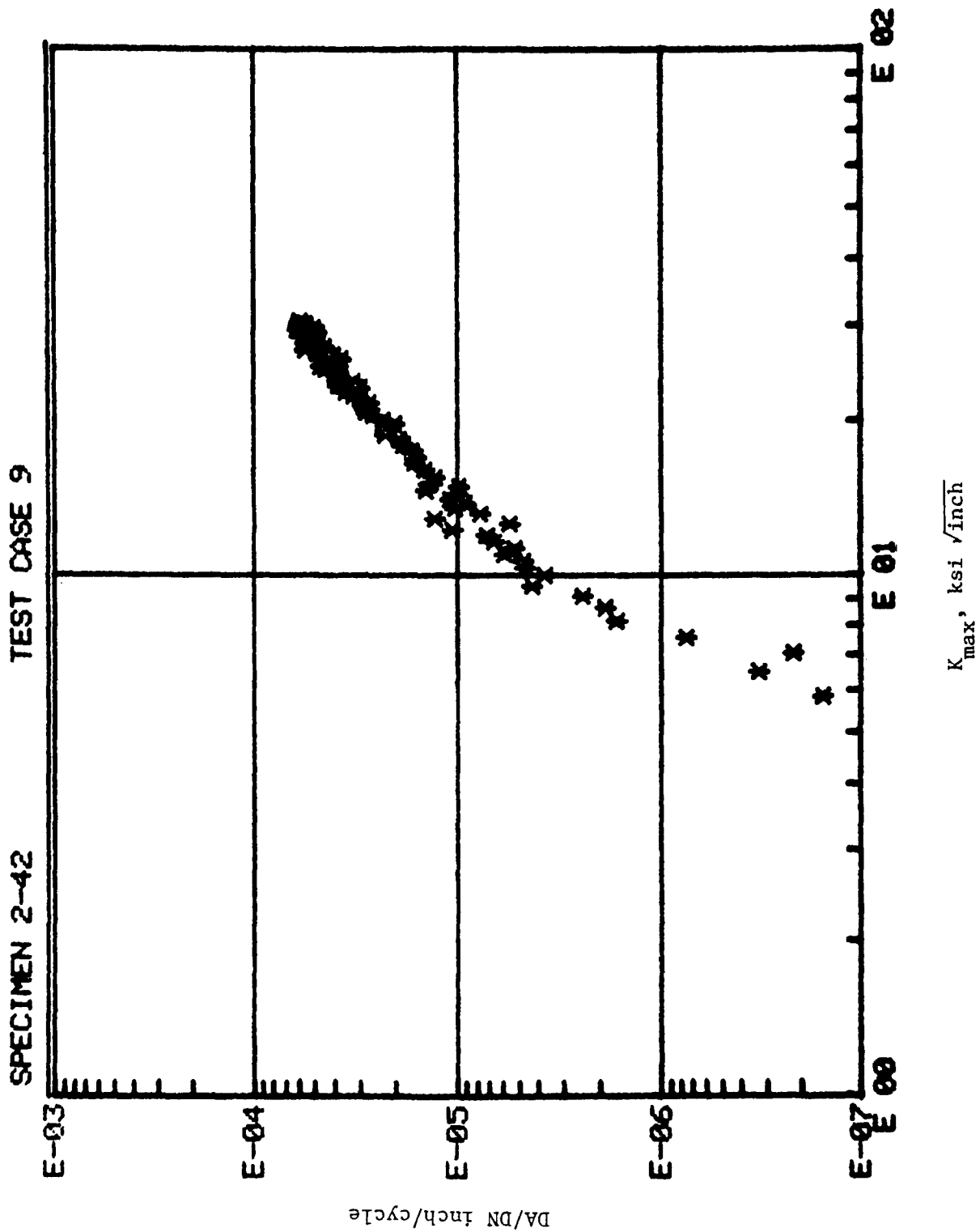
REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
51	7.5	1.22322E+06	43.7	43	44.4	42
52	7.5	1.22513E+06	44.7	44	45.5	43.2
53	7.5	1.22674E+06	45.8	45	46.6	44.2
54	7.5	1.22804E+06	46.8	46	47.6	45.2
55	7.5	1.22921E+06	47.7	47	48.6	46.1
56	7.5	1.23034E+06	48.6	48	49.6	46.8
57	7.5	1.23141E+06	49.8	49	50.7	48
58	7.5	1.23239E+06	51	50	51.9	49.1
59	7.5	1.23317E+06	51.8	51	52.8	50
60	7.5	1.23395E+06	53.1	52	54	51.1
61	7.5	1.23457E+06	54.4	53	55.1	52.3
62	7.5	1.23511E+06	55.7	54	56.5	53.3
63	7.5	1.23554E+06	56.7	55	58	54.1
64	7.5	1.23590E+06	58.2	56	59.2	55.2



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 9 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-42 FLAW TYPE - 1  
TEMP = 74 F REL HUM = 44 % 08/01/77  
B = .185 IN R(L) = .1 R(T) = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = 0  
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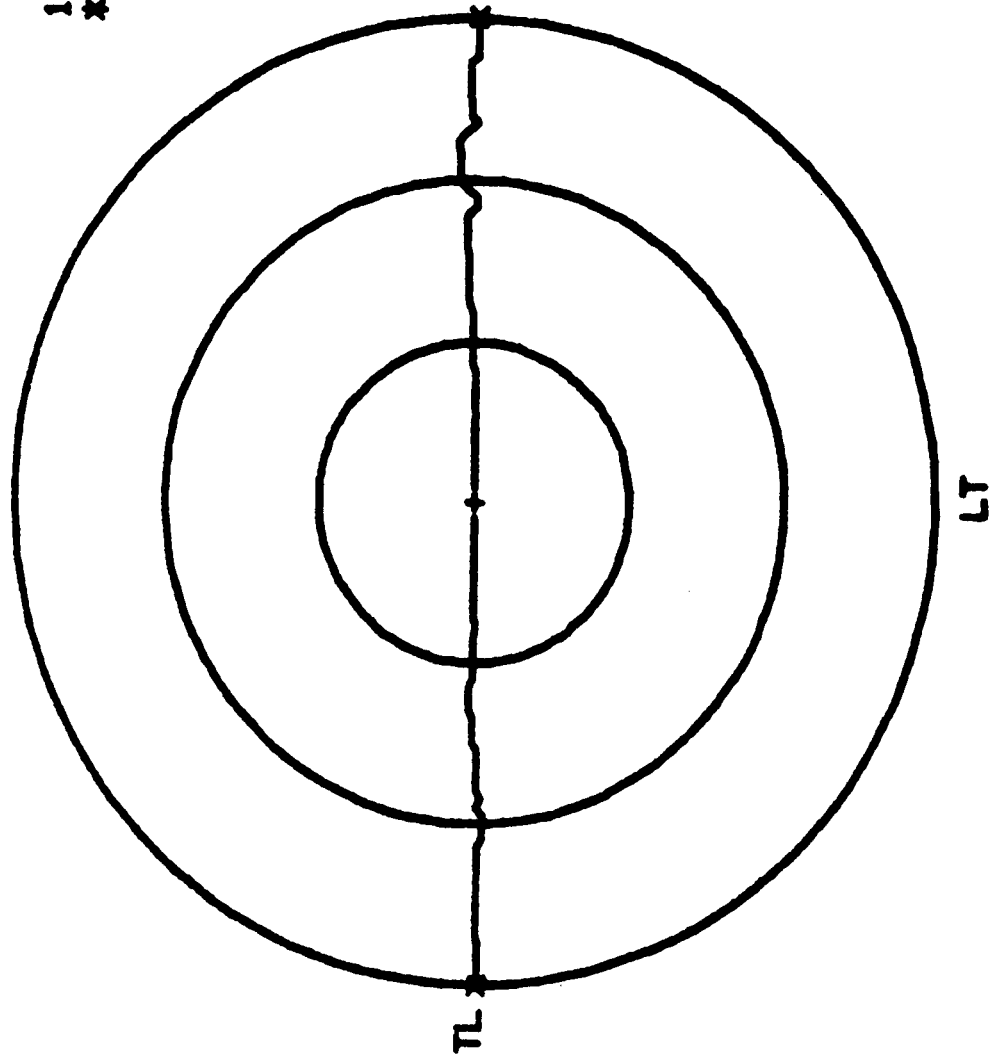
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	19.7	5.25	0	2	1.9	180	-3
2	19.7	5.25	160230	2.5	2.4	180	-2
3	19.7	5.25	243150	3	3	180	0
4	19.7	5.25	333960	3.5	3.3	180	0
5	19.7	5.25	373700	4	4	180	0
6	19.7	5.25	390270	4.5	4.6	180	0
7	19.7	5.25	402170	5	5	180	0
8	19.7	5.25	414540	5.5	5.7	180	0
9	19.7	5.25	420360	6	6.2	180	0
10	19.7	5.25	427680	6.5	6.8	180	0
11	19.7	5.25	431410	7	7	180	0
12	19.7	5.25	437210	7.5	7.6	180	0
13	19.7	5.25	441010	8	8	180	0
14	19.7	5.25	446240	8.5	8.6	180	0
15	19.7	5.25	449640	9	9	180	0
16	19.7	5.25	453120	9.5	9.5	180	0
17	19.7	5.25	455230	10	9.9	180	0
18	19.7	5.25	460190	10.5	10.5	180	0
19	19.7	5.25	462130	11	11	180	0
20	19.7	5.25	465700	11.5	11.6	180	0
21	19.7	5.25	467900	12	12	180	0
22	19.7	5.25	471150	12.5	12.7	180	0
23	19.7	5.25	473210	13	13.1	180	0
24	19.7	5.25	475970	13.5	13.7	180	0
25	19.7	5.25	477370	14	14	180	0
26	19.7	5.25	480170	14.5	14.6	180	0
27	19.7	5.25	481840	15	15	181	0
28	19.7	5.25	485700	16	16	181	0
29	19.7	5.25	489820	17.1	17.3	180	1
30	19.7	5.25	492590	18	18.2	180	1
31	19.7	5.25	495700	19	19.2	180	1
32	19.7	5.25	498840	20	20.3	180	1
33	19.7	5.25	501560	21	21.3	180	1
34	19.7	5.25	504290	22	22.4	180	1
35	19.7	5.25	506730	23	23.6	179	1
36	19.7	5.25	508970	24	24.6	179	2
37	19.7	5.25	511410	25	25.6	179	2
38	19.7	5.25	513550	26	26.6	179	2
39	19.7	5.25	515380	27	27.5	180	2
40	19.7	5.25	517070	28	28.4	180	2
41	19.7	5.25	519020	29	29.6	180	2
42	19.7	5.25	520850	30	30.6	180	2
43	19.7	5.25	522610	31	31.7	181	2
44	19.7	5.25	524160	32	32.7	181	2
45	19.7	5.25	525580	33	33.7	181	2
46	19.7	5.25	527400	34	34.9	181	2
47	19.7	5.25	528640	35	35.8	181	2
48	19.7	5.25	530160	36	36.8	181	0
49	19.7	5.25	531440	37	37.8	182	0
50	19.7	5.25	532770	38	38.9	181	2

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	19.7	5.25	534140	39	40	182	3
52	19.7	5.25	535270	40	41	182	3
53	19.7	5.25	536280	41	41.9	182	3
54	19.7	5.25	537510	42	43	182	3
55	19.7	5.25	538980	43	44.2	181	3
56	19.7	5.25	540030	44	45	181	3
57	19.7	5.25	541200	45	45.9	181	2
58	19.7	5.25	542280	46	47	181	0
59	19.7	5.25	543130	47	47.9	181	1
60	19.7	5.25	544190	48	48.8	181	1
61	19.7	5.25	545180	49	49.7	181	1
62	19.7	5.25	546270	50	50.8	181	1
63	19.7	5.25	547170	51	51.6	181	1
64	19.7	5.25	548120	52	52.6	181	1
65	19.7	5.25	549000	53	53.6	181	1
66	19.7	5.25	549920	54	54.6	181	1
67	19.7	5.25	550740	55	55.2	181	0
68	19.7	5.25	551650	56	56.4	181	0
69	19.7	5.25	552530	57	57.2	181	0
70	19.7	5.25	553280	58	58	181	0
71	19.7	5.25	554180	59	59	181	0
72	19.7	5.25	555030	60	60	181	0



SPECIMEN 2-42

TEST CASE 9



-----  
CRACK GROWTH TEST OF 2024-T3 TEST CASE 10 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-6 FLAW TYPE - 7

TEMP = 75 F REL HUM = 47 % 02-08-78

B = .176 IN R(L) = .1 R(T) = .1

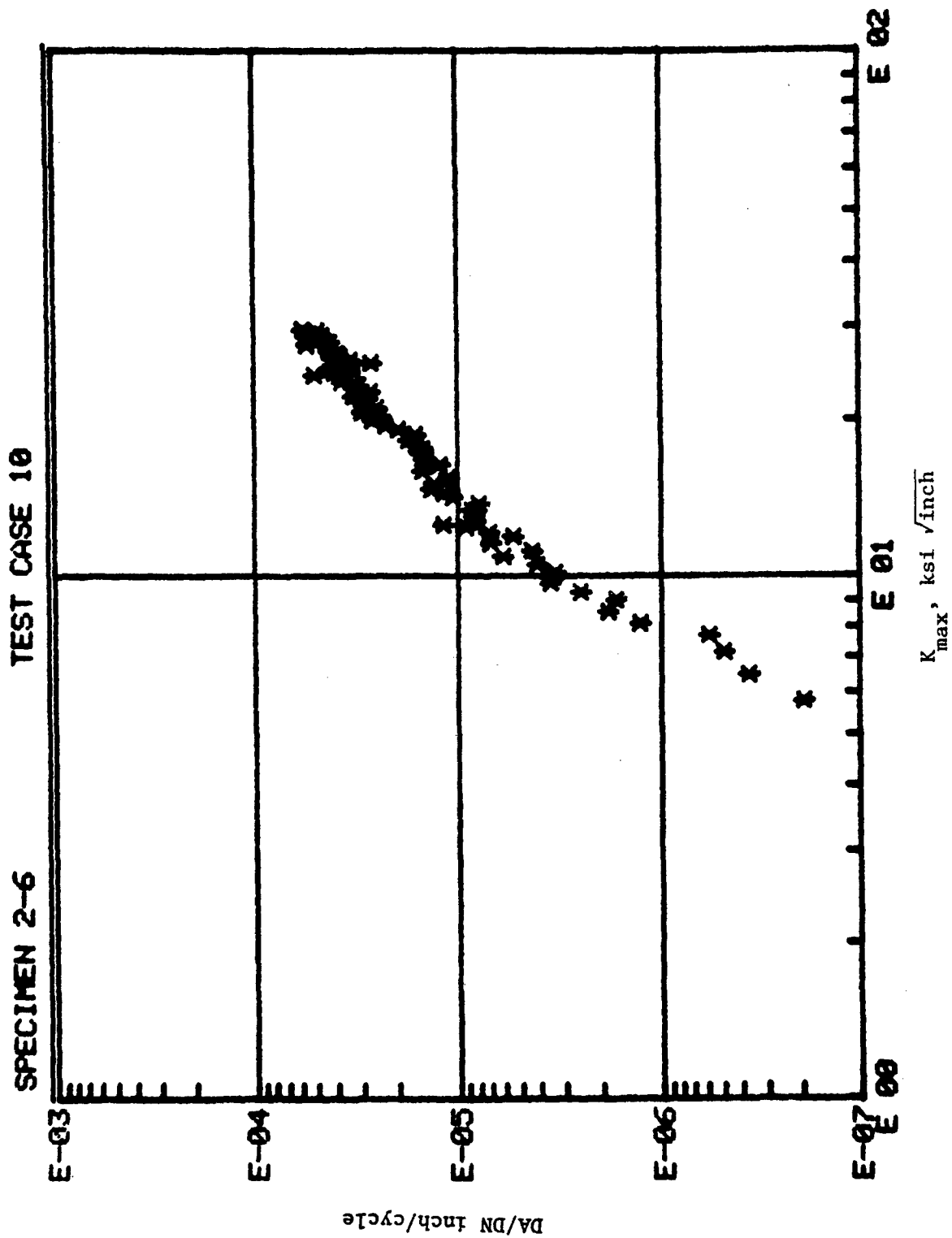
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 0  
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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	19.71	5.25	0	2	1.8	175	-2
2	19.71	5.25	129120	2.5	2.3	175	-2
3	19.71	5.25	210740	3	3	175	-2
4	19.71	5.25	266780	3.6	3.5	176	-3
5	19.71	5.25	313650	4.2	4	177	-3
6	19.71	5.25	323480	4.5	4.2	177	-3
7	19.71	5.25	341170	5.2	4.8	177	-3
8	19.71	5.25	353170	5.6	5.2	177	-3
9	19.71	5.25	360180	6	5.5	177	-3
10	19.71	5.25	369370	6.6	6.2	177	-4
11	19.71	5.25	376100	7	6.7	177	-4
12	19.71	5.25	382280	7.7	7	177	-4
13	19.71	5.25	386440	8.2	7.5	177	-4
14	19.71	5.25	391630	8.6	8	177	-3
15	19.71	5.25	396340	9.2	8.7	178	-3
16	19.71	5.25	399170	9.5	9	178	-2
17	19.71	5.25	402730	10	9.5	179	-2
18	19.71	5.25	404120	10.3	9.7	179	-2
19	19.71	5.25	405190	10.5	10	179	-1
20	19.71	5.25	408550	11	10.6	180	-1
21	19.71	5.25	411270	11.5	11	180	0
22	19.71	5.25	415070	12	11.8	180	0
23	19.71	5.25	418600	12.7	12.2	179	-1
24	19.71	5.25	422390	13.6	12.9	178	-1
25	19.71	5.25	424890	14	13.3	178	-2
26	19.71	5.25	426120	14.5	13.9	178	-2
27	19.71	5.25	428250	15	14.5	178	-2
28	19.71	5.25	429560	15.2	14.9	177	-2
29	19.71	5.25	432520	16	15.4	177	-3
30	19.71	5.25	435850	17.1	16.3	177	-3
31	19.71	5.25	439510	18	17.2	177	-3
32	19.71	5.25	443350	19	18.4	177	-3
33	19.71	5.25	446660	20	19.4	176	-4
34	19.71	5.25	447660	20.2	19.8	176	-4
35	19.71	5.25	450610	21	20.9	177	-4
36	19.71	5.25	453630	22	22	177	-3
37	19.71	5.25	456440	23	22.8	177	-3
38	19.71	5.25	459000	24	23.8	178	-3
39	19.71	5.25	461230	25	24.3	178	-2
40	19.71	5.25	463260	26	25.9	178	-2
41	19.71	5.25	465450	27	27	179	-1
42	19.71	5.25	466830	28	27.6	179	-2
43	19.71	5.25	468930	29	28.7	179	-2
44	19.71	5.25	470590	30	29.6	179	-2
45	19.71	5.25	472560	31	30.9	179	-2
46	19.71	5.25	474120	32	31.9	179	-3
47	19.71	5.25	476090	33	33	179	-2
48	19.71	5.25	477590	34	33.9	180	-2
49	19.71	5.25	479220	35	34.9	180	-2
50	19.71	5.25	480650	36	36	180	-1

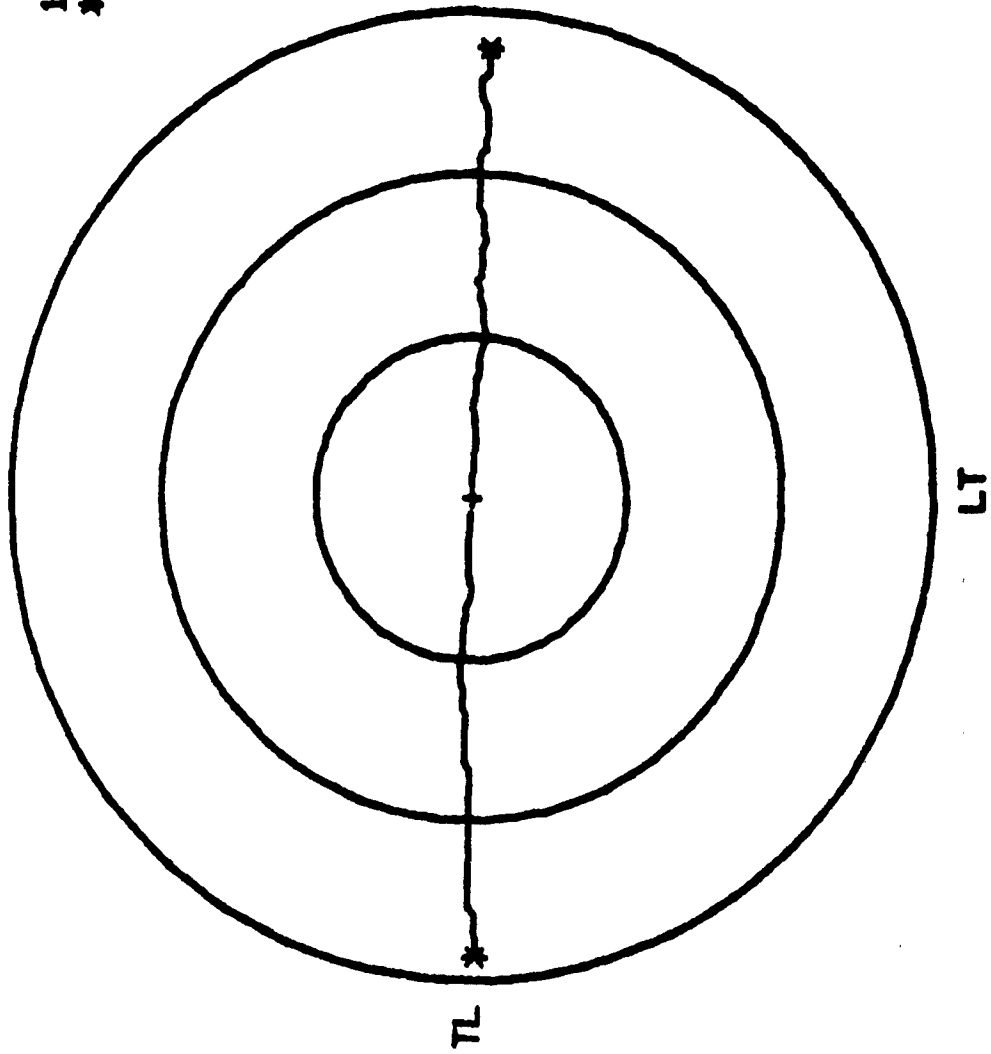
REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	19.71	5.25	482420	37	37.3	180	-1
52	19.71	5.25	483520	38	38.5	180	-1
53	19.71	5.25	484780	39	39.5	180	-1
54	19.71	5.25	486180	40	40.4	180	-1
55	19.71	5.25	487650	41.1	41.7	180	-1
56	19.71	5.25	488880	42	42.1	180	-1
57	19.71	5.25	490370	43	43.1	180	-2
58	19.71	5.25	491610	44	44.1	180	-2
59	19.71	5.25	492740	45	44.8	180	-2
60	19.71	5.25	494020	46	45.8	180	-2
61	19.71	5.25	495260	47	46.9	180	-2
62	19.71	5.25	496380	48	47.8	180	-2
63	19.71	5.25	498210	50	49.8	180	-1
64	19.71	5.25	499210	51	50.5	180	-1
65	19.71	5.25	500210	52	51.5	181	-1
66	19.71	5.25	501230	53	52.5	181	-2
67	19.71	5.25	502040	54	53	181	-2
68	19.71	5.25	502890	55	53.8	181	-2
69	19.71	5.25	503860	56	54.7	181	-2
70	19.71	5.25	504650	57	55.5	181	-2



SPECIMEN 2-6

TEST CASE 10

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 2024-T3

SPEC TL-2-1

CCT SPECIMEN TYPE

TEST CASE 6

TEMP = 76 F

REL HUM = 56 %

4-18-77

W = 7 IN

B = .176 IN

R = .1

FREQUENCY = 5 HZ

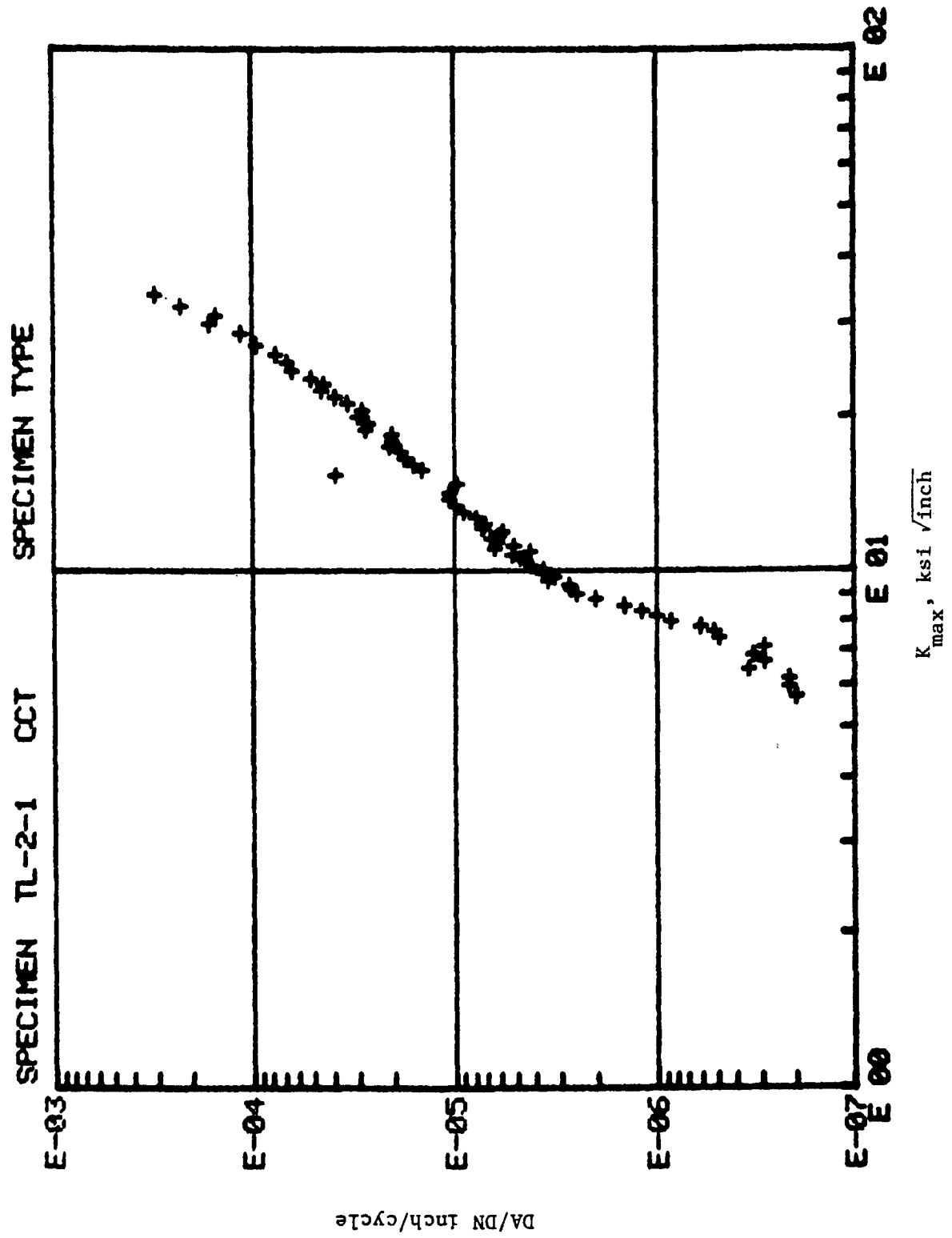
LAB AIR ENVIRONMENT

GRID SPACING = .05 IN

FILE CODE: STL21

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	7.5	0	6	5	5	6
2	7.5	152930	6.5	5.75	5.6	6.6
3	7.5	248180	7	6.1	6	7
4	7.5	368410	7.5	6.9	6.5	7.3
5	7.5	439630	8	7.2	7	8
6	7.5	529690	8.4	7.9	7.5	8.5
7	7.5	590680	8.8	8.2	8	8.9
8	7.5	703570	9.5	9	8.5	9.5
9	7.5	770050	10.2	9.8	9	10.1
10	7.5	815670	10.7	10.2	9.5	10.6
11	7.5	854760	11	10.7	10	11.2
12	7.5	876700	11.3	11	10.5	11.6
13	7.5	901580	11.8	11.6	11	12
14	7.5	923530	12.3	12	11.5	12.7
15	7.5	942390	12.9	12.6	12	13.2
16	7.5	959210	13.5	13.2	12.7	14
17	7.5	970250	14.2	13.7	13.1	14.6
18	7.5	979520	14.6	14.4	13.6	15
19	7.5	986370	15	14.7	14	15.4
20	7.5	993940	15.4	15.2	14.6	16
21	7.5	1.00093E+06	16	15.7	15	16.3
22	7.5	1.00878E+06	16.5	16.2	15.6	17
23	7.5	1.01430E+06	16.8	16.8	16	17.3
24	7.5	1.02113E+06	17.5	17.2	16.5	18
25	7.5	1.02591E+06	17.9	17.6	17	18.4
26	7.5	1.03168E+06	18.5	18.3	17.5	18.8
27	7.5	1.03676E+06	18.9	18.8	18	19.5
28	7.5	1.04233E+06	19.4	19.2	18.6	19.9
29	7.5	1.04567E+06	19.7	19.6	19.1	20.4
30	7.5	1.05034E+06	20	20.2	19.5	21
31	7.5	1.05442E+06	20.7	20.7	20	21.3
32	7.5	1.05934E+06	21.2	21.3	20.5	22.3
33	7.5	1.06265E+06	21.6	21.8	21	22.5
34	7.5	1.06757E+06	22.3	22.3	21.4	23.2
35	7.5	1.07153E+06	22.8	23	22	23.7
36	7.5	1.07737E+06	23.5	23.8	23	24.5
37	7.5	1.08426E+06	24.6	24.9	24	25.6
38	7.5	1.08965E+06	25.6	25.8	25	26.6
39	7.5	1.09519E+06	26.7	27	26	27.7
40	7.5	1.10016E+06	27.8	28.1	27	28.7
41	7.5	1.10453E+06	28.7	28.9	28	29.7
42	7.5	1.11570E+06	31	31.2	30	31.8
43	7.5	1.11702E+06	31.9	32.3	31	32.9
44	7.5	1.11987E+06	32.8	33	32	33.6
45	7.5	1.12372E+06	33.9	34.3	33.1	35
46	7.5	1.12653E+06	35	35.2	34	36.1
47	7.5	1.12924E+06	35.9	36.3	35	37.1
48	7.5	1.13161E+06	37	37.3	36	38
49	7.5	1.13380E+06	37.8	38.1	37	39
50	7.5	1.13625E+06	38.8	39.1	38	40

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
51	7.5	1.13811E+06	39.7	40.3	39	41
52	7.5	1.14006E+06	40.8	41.3	40	42.1
53	7.5	1.14172E+06	41.8	42.4	41	43
54	7.5	1.14361E+06	42.9	43.5	42	44.1
55	7.5	1.14510E+06	43.8	44.4	43.1	45.2
56	7.5	1.14642E+06	44.9	45.6	44	46.1
57	7.5	1.14741E+06	45.8	46.4	45	47
58	7.5	1.14835E+06	46.4	47.1	46	48
59	7.5	1.14933E+06	47.4	48.2	47	48.9
60	7.5	1.15022E+06	48.7	49.3	48	50
61	7.5	1.15099E+06	49.9	50.2	49	51
62	7.5	1.15163E+06	50.8	51.2	50	52
63	7.5	1.15226E+06	51.9	52.7	51	53.2
64	7.5	1.15293E+06	53.3	54.2	52.4	55
65	7.5	1.15313E+06	53.9	54.9	53	55.7
66	7.5	1.15346E+06	54.8	55.9	54	56.8
67	7.5	1.15370E+06	55.9	57	55	57.9
68	7.5	1.15388E+06	57	58.2	56	59





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CRACK GROWTH TEST OF 2024-T3

SPEC TL-2-2

CCT SPECIMEN TYPE

TEST CASE 132

TEMP = 74 F

REL HUM = 50 %

5/19/77

W = 7.012 IN

B = .179 IN

R = .1

FREQUENCY = 10 HZ

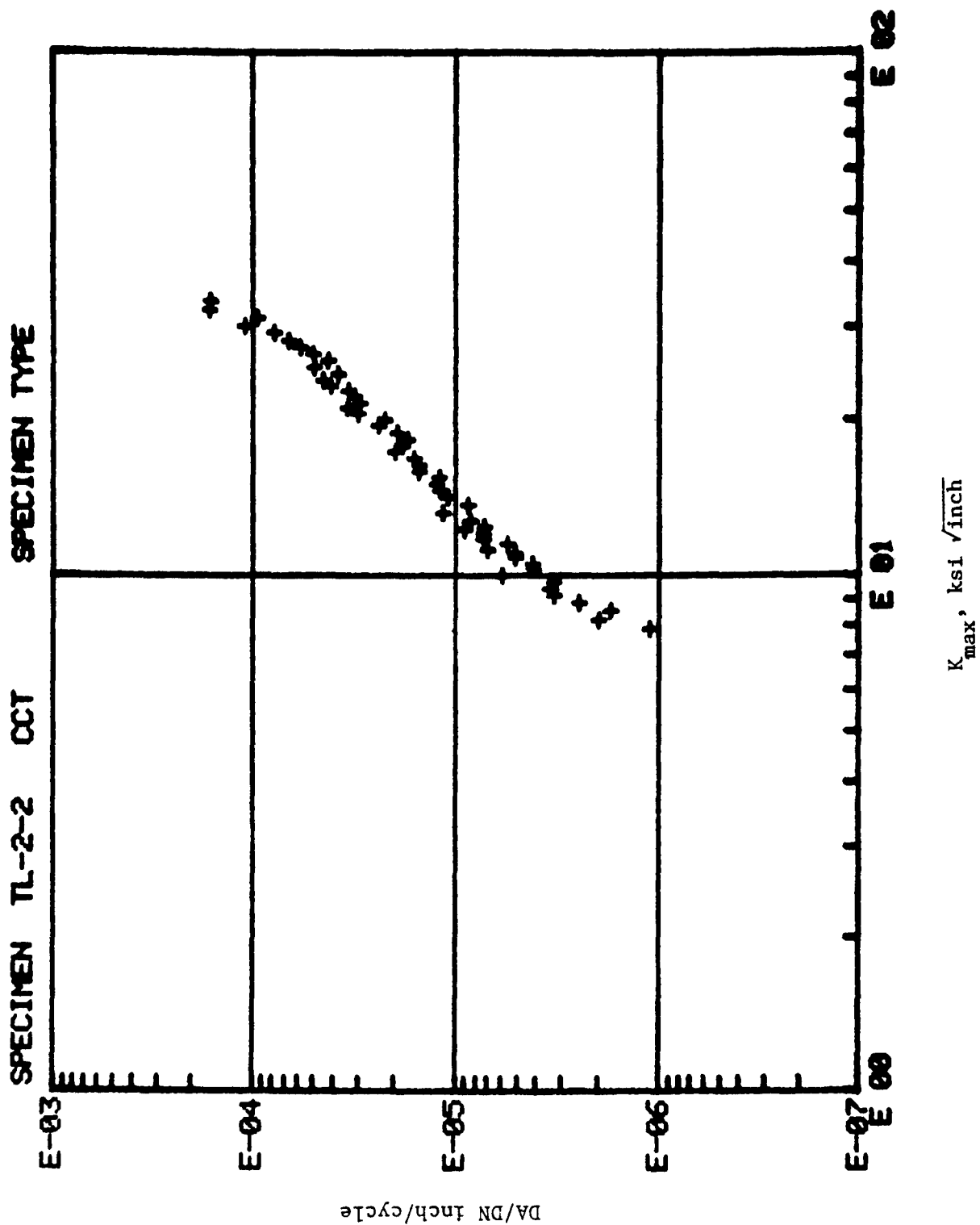
LAB AIR ENVIRONMENT

GRID SPACING = .05 IN

FILE CODE: STL22  
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REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2
1	10	0	6	6.3
2	10	22600	6.5	6.8
3	10	36630	7	7.4
4	10	52590	7.5	8
5	10	62710	8	8.5
6	10	70320	8.5	9
7	10	77620	9	9.5
8	10	85970	9.5	10.1
9	10	90220	10	10.6
10	10	96870	10.5	11.2
11	10	103460	11	11.8
12	10	107860	11.5	12.2
13	10	113220	12	12.8
14	10	116430	12.5	13.2
15	10	120940	13	13.7
16	10	125030	13.5	14.4
17	10	128470	14	14.9
18	10	130600	14.5	15.2
19	10	133790	15	15.6
20	10	139160	16	16.4
21	10	144350	17	17.8
22	10	149550	18	18.6
23	10	153940	19	19.5
24	10	158100	20	20.5
25	10	162200	21	21.5
26	10	166550	22	22.6
27	10	169700	23	23.5
28	10	173150	24	24.6
29	10	176440	25	25.7
30	10	179230	26	26.9
31	10	181960	27	27.9
32	10	184860	28	28.9
33	10	187960	29	30.3
34	10	190270	30	31.5
35	10	192730	31	32.7
36	10	194490	32	33.8
37	10	195740	33	34.5
38	10	197340	34	35.4
39	10	198850	35	36.3
40	10	200340	36	37.3
41	10	201370	37	38
42	10	202400	38	39
43	10	203730	39	39.9
44	10	205000	40	41.4
45	10	206100	41	42.4
46	10	207330	42	43.7
47	10	208190	43	44.7
48	10	208950	44	45.7
49	10	209690	45	47
50	10	210150	46	48

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2
51	10	210680	47	49
52	10	211050	48	50.4
53	10	211460	49	52



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 14 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-39 FLAW TYPE - 2

TEMP = 75 F

REL HUM = 50 %

7-22-77

B = .176 IN

R(L) = .1

R(T) = .1

FREQ = 5 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

BIAXIAL RATIO = 0  
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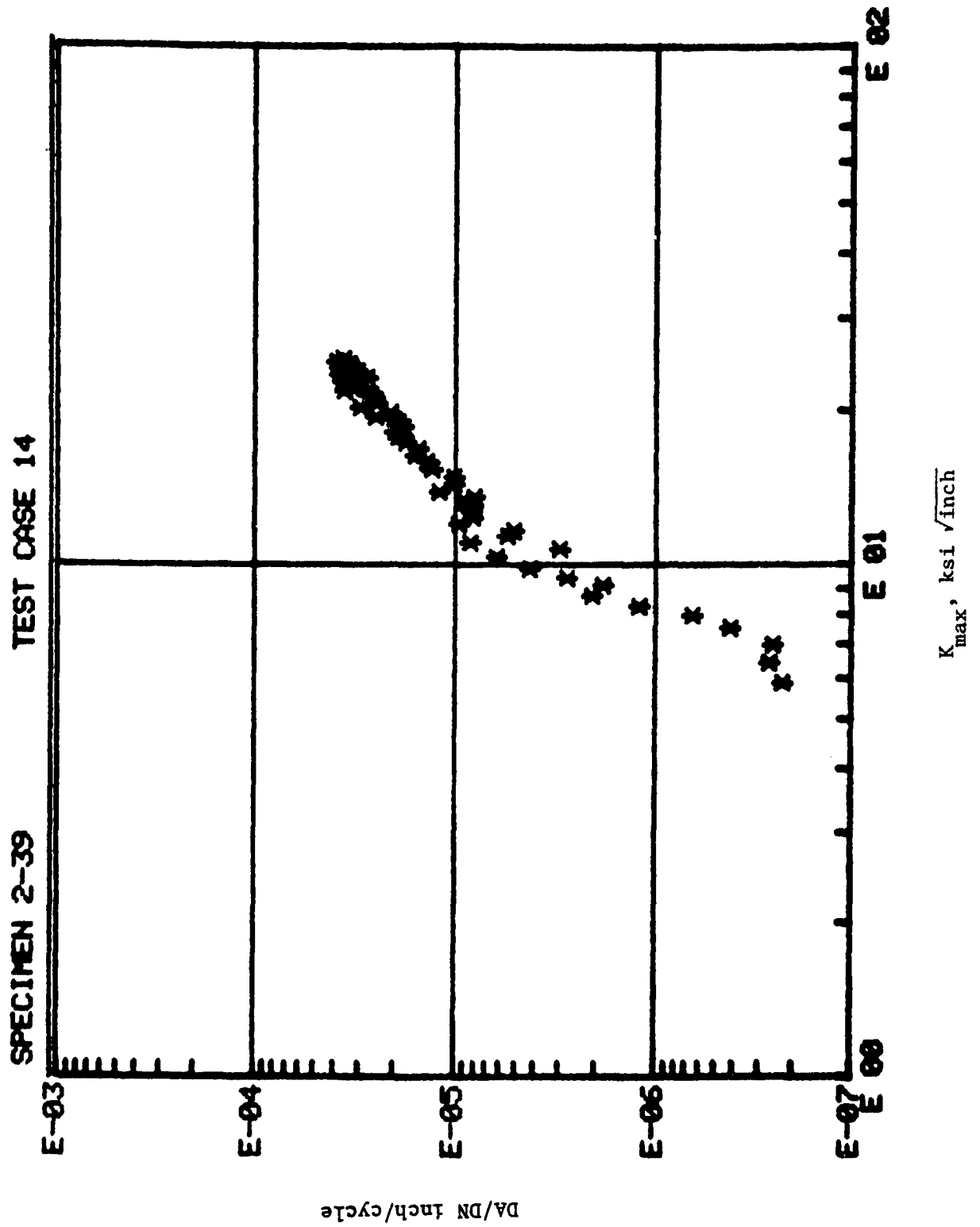
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	5.25	19.7	0	2	2	270	90
2	5.25	19.7	92910	2.5	2.35	270	90
3	5.25	19.7	181630	3	2.8	270	90
4	5.25	19.7	269670	3.5	3.2	269	89
5	5.25	19.7	334760	4	3.8	268	88
6	5.25	19.7	365260	4.6	4	267	88
7	5.25	19.7	377690	5	4.2	267	87
8	5.25	19.7	390860	5.5	4.8	267	87
9	5.25	19.7	401860	6.1	5	268	87
10	5.25	19.7	407270	6.5	5.2	268	87
11	5.25	19.7	414910	7	6	268	90
12	5.25	19.7	420120	7.5	6.8	267	88
13	5.25	19.7	426800	8.1	7	267	88
14	5.25	19.7	430360	8.5	7.8	267	87
15	5.25	19.7	433570	9	8	267	87
16	5.25	19.7	438470	9.5	8.5	267	86
17	5.25	19.7	441320	10	9.1	267	85
18	5.25	19.7	445000	10.5	9.8	267	85
19	5.25	19.7	447700	11	10.2	268	85
20	5.25	19.7	450900	11.5	10.75	268	85
21	5.25	19.7	453010	12	11	268	86
22	5.25	19.7	456120	12.5	11.5	268	86
23	5.25	19.7	459460	13.1	12.5	268	86
24	5.25	19.7	462930	14	13	268	86
25	5.25	19.7	467860	15	14	268	86
26	5.25	19.7	472060	16	15.2	267	86
27	5.25	19.7	475480	17	16.1	267	86
28	5.25	19.7	478500	18	17	266	86
29	5.25	19.7	482070	19	18.2	266	86
30	5.25	19.7	484880	20	19.2	266	86
31	5.25	19.7	487480	21	20.2	266	86
32	5.25	19.7	489590	22	20.9	266	86
33	5.25	19.7	492460	23	22	266	86
34	5.25	19.7	495050	24	23	266	86
35	5.25	19.7	497050	25	24	266	86
36	5.25	19.7	499550	26	25.1	265	86
37	5.25	19.7	501400	27.1	26.2	265	86
38	5.25	19.7	503240	28	27.1	265	86
39	5.25	19.7	505410	29	28.3	265	86
40	5.25	19.7	507210	30	29.2	265	86
41	5.25	19.7	508750	31.3	30.1	265	86
42	5.25	19.7	510160	32	31	265	86
43	5.25	19.7	511910	33	32	265	86
44	5.25	19.7	513160	34	32.8	265	86
45	5.25	19.7	514980	35	33.8	265	86
46	5.25	19.7	516440	36	35	265	86
47	5.25	19.7	517810	37	35.7	265	86
48	5.25	19.7	519630	38	37.1	266	86
49	5.25	19.7	521040	39	38	266	86
50	5.25	19.7	522580	40	39.4	266	86

SPECIMEN 2-39

TEST CASE 14

PAGE 3

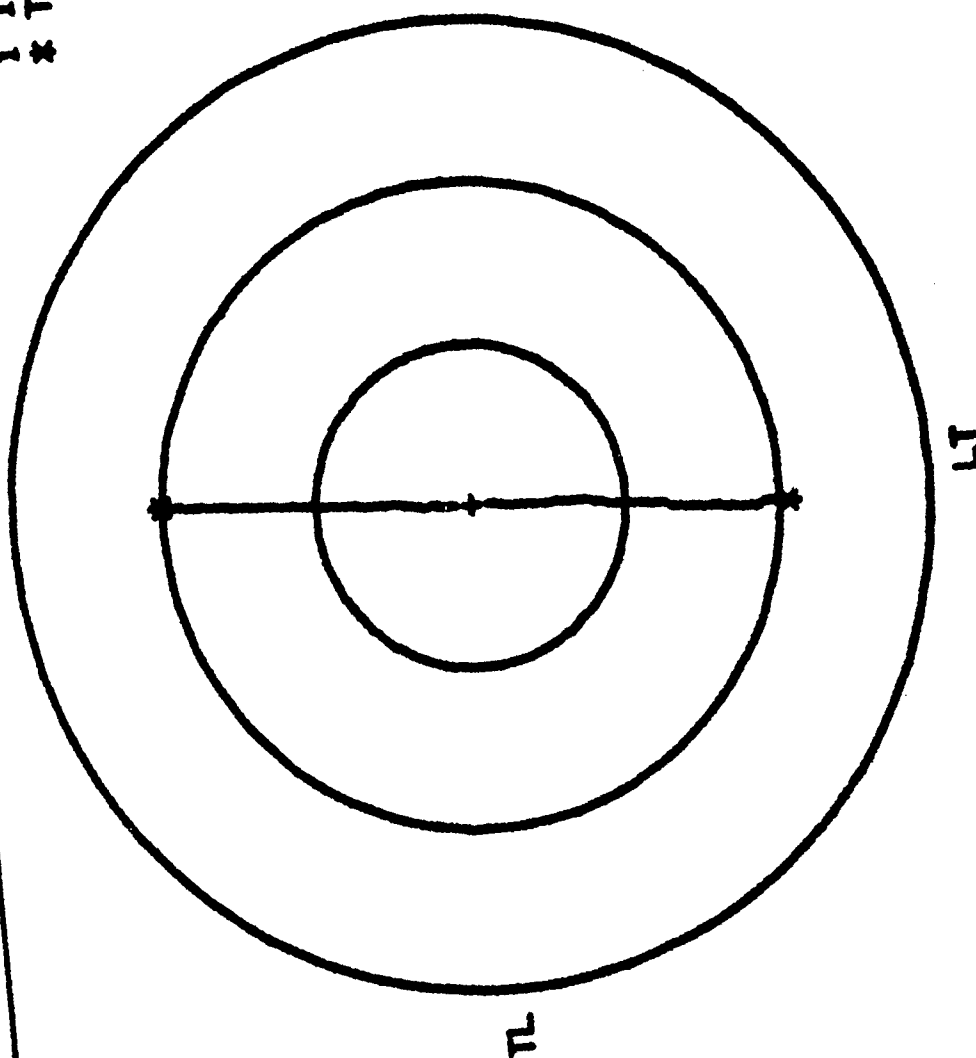
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	5.25	19.7	523830	41	40.2	266	86





SPECIMEN 2-39      TEST CASE 14

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 2024-T3

SPEC LT-2-4

CCT SPECIMEN TYPE

TEST CASE 149

TEMP = 74 F

REL HUM = 100 %

5/23/77

W = 7 IN

B = .179 IN

R = .1

FREQUENCY = 10 HZ

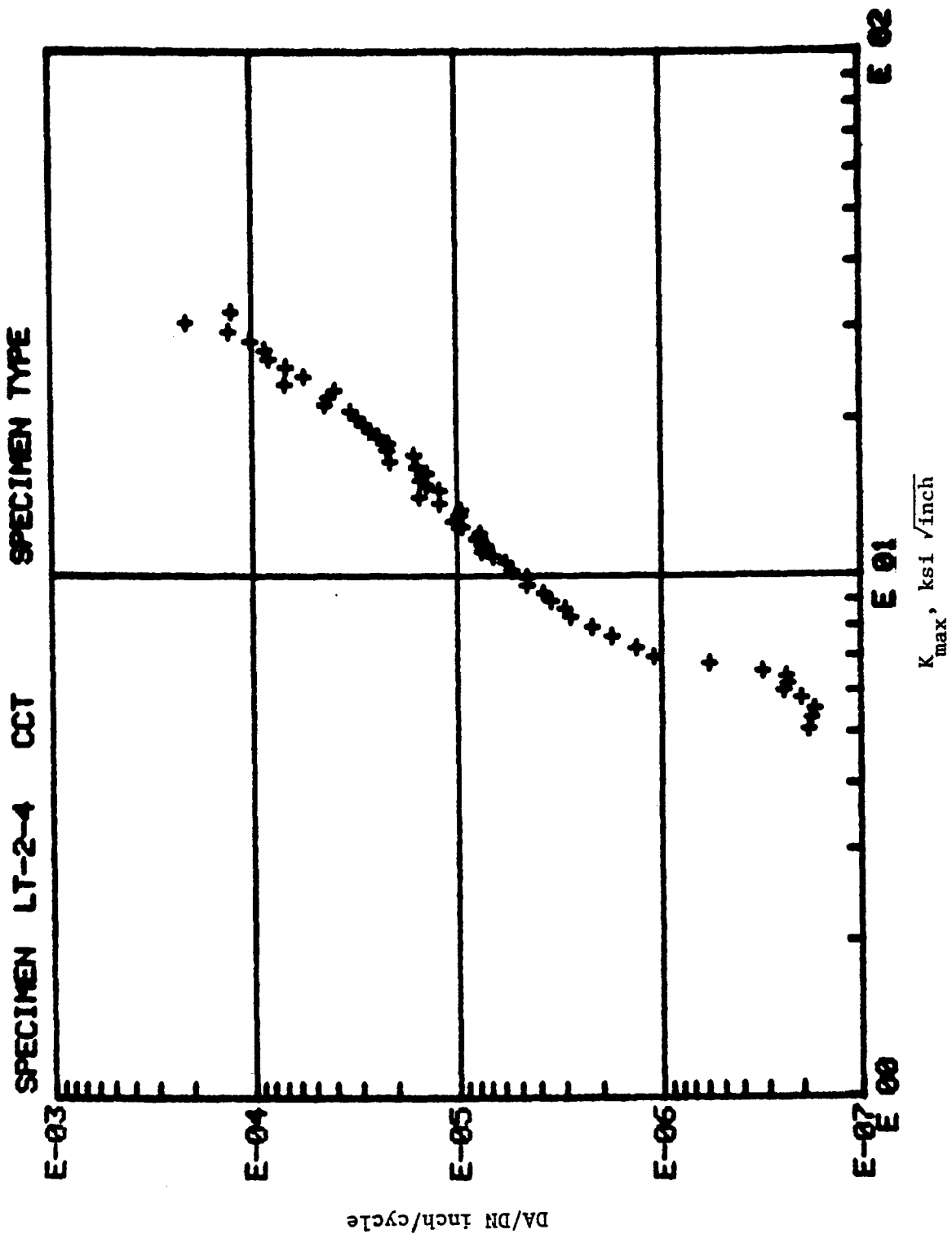
DIST H2O ENVIRONMENT

GRID SPACING = .05 IN

FILE CODE: 4LT24

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	7	0	5	5.4	5.5	4.6
2	7	168470	5.5	6	6.3	5.2
3	7	292680	6	6.3	6.7	5.8
4	7	465460	6.5	7	7.5	6.2
5	7	588310	7	7.6	7.8	6.8
6	7	679270	7.5	8	8.4	7.1
7	7	785400	8	8.5	8.8	7.7
8	7	894530	8.6	9	9.3	8.2
9	7	941970	9	9.2	9.5	8.6
10	7	1.00586E+06	9.5	10	10.3	9.5
11	7	1.02769E+06	10	10.4	10.8	10
12	7	1.06683E+06	11	11.5	11.9	11
13	7	1.09449E+06	12	12.5	12.9	11.9
14	7	1.11606E+06	13	13.4	13.8	12.9
15	7	1.13597E+06	14	14.6	15	14
16	7	1.15161E+06	15	15.6	15.8	14.9
17	7	1.16491E+06	16	16.5	16.6	15.9
18	7	1.17709E+06	17	17.5	17.8	16.4
19	7	1.18889E+06	18	18.6	18.7	17.7
20	7	1.20101E+06	19.1	19.6	19.9	18.8
21	7	1.20927E+06	20	20.6	20.8	19.6
22	7	1.21941E+06	21.2	21.7	22	20.8
23	7	1.22519E+06	22	22.3	22.9	21.6
24	7	1.23179E+06	23	23.3	23.9	22.6
25	7	1.23890E+06	24	24.4	24.9	23.6
26	7	1.24433E+06	25	25.1	25.9	24.4
27	7	1.25109E+06	26	26.1	26.9	25.6
28	7	1.25596E+06	27	27.1	27.8	26.4
29	7	1.26101E+06	28	28.1	28.9	27.5
30	7	1.26605E+06	29	29.2	29.8	28.4
31	7	1.27164E+06	30	30.4	30.9	29.4
32	7	1.27617E+06	31	31.4	32	30.7
33	7	1.28017E+06	32	32.4	34	31.6
34	7	1.28407E+06	33.1	33.3	34.8	32.6
35	7	1.28698E+06	34	34	35.8	33.3
36	7	1.29051E+06	35	35	37	34.4
37	7	1.29471E+06	36.1	36.1	38.1	35.8
38	7	1.29762E+06	37	37.5	38.7	36.6
39	7	1.29979E+06	38	38.3	39.8	37.4
40	7	1.30207E+06	39.1	39.2	40.7	38.5
41	7	1.30527E+06	40.1	40.2	42	39.4
42	7	1.30777E+06	41	41.4	43	40.6
43	7	1.30946E+06	42	42	43.8	41.5
44	7	1.31131E+06	43	43	44.9	42.3
45	7	1.31317E+06	44	44.3	45.9	43.2
46	7	1.31466E+06	45	45	46.9	44.2
47	7	1.31610E+06	46	46	47.7	45.2
48	7	1.31723E+06	47	47	48.8	46.1
49	7	1.31847E+06	48	47.9	50	47.2
50	7	1.31964E+06	49	49	50.8	48

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
51	7	1.32031E+06	50	49.5	52	49
52	7	1.32133E+06	51	50.9	53	50.1
53	7	1.32207E+06	52	52	54	51
54	7	1.32269E+06	53	53	55	52.1
55	7	1.32324E+06	54	53.9	56	53
56	7	1.32376E+06	55	55.1	56.9	54.1
57	7	1.32411E+06	56	56	57.7	55
58	7	1.32435E+06	56.8	56.5	59.8	55.6
59	7	1.32473E+06	58	57.7	59.8	57



-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 47 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-111 FLAW TYPE - 1

TEMP = 76 F

REL HUM = 50 %

6-8-77

B = .176 IN

R(L) = .7

R(T) = .7

FREQ = 5 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

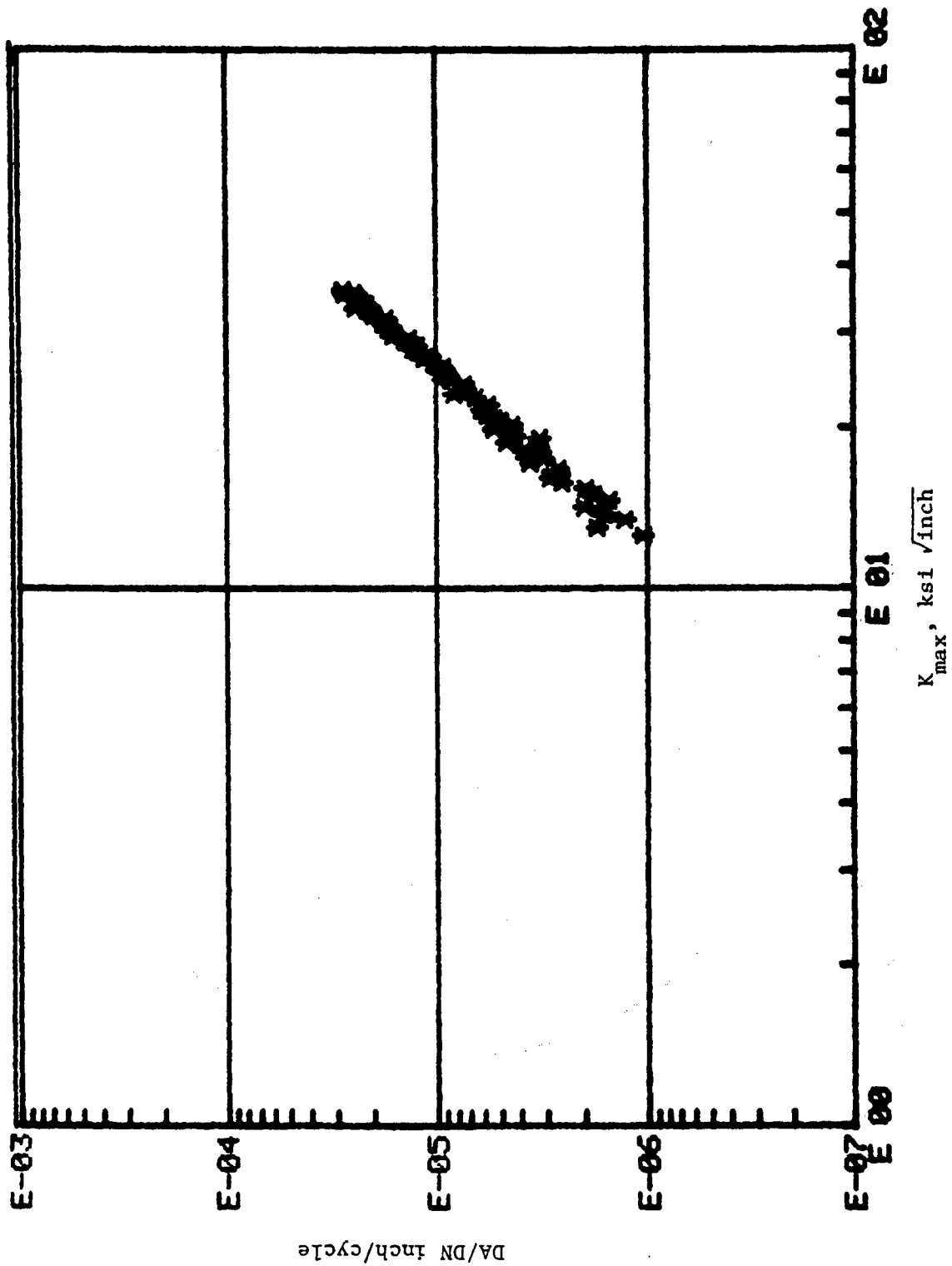
BIAXIAL RATIO = 1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	29.9	29.9	0	7.1	6.65	181	2
2	29.9	29.9	17850	7.5	7	181	3
3	29.9	29.9	35170	8	7.7	182	3
4	29.9	29.9	58770	8.5	8	182	3
5	29.9	29.9	66380	9	8.5	182	3
6	29.9	29.9	78900	9.5	9	182	3
7	29.9	29.9	95350	10	9.5	182	3
8	29.9	29.9	109280	10.5	10	182	3
9	29.9	29.9	123200	11	10.6	183	3
10	29.9	29.9	134000	11.5	11.2	183	3
11	29.9	29.9	141750	12	11.6	183	3
12	29.9	29.9	150380	12.5	12	183	3
13	29.9	29.9	160690	13	12.6	183	3
14	29.9	29.9	167690	13.5	13.1	183	4
15	29.9	29.9	176500	14	13.7	183	4
16	29.9	29.9	183430	14.6	14.1	183	4
17	29.9	29.9	189970	15	14.7	183	4
18	29.9	29.9	197620	15.5	15.2	184	4
19	29.9	29.9	204100	16.1	15.8	185	4
20	29.9	29.9	209500	16.5	16.1	185	5
21	29.9	29.9	215400	17	16.6	185	5
22	29.9	29.9	221460	17.5	17.2	185	5
23	29.9	29.9	226120	18	17.7	185	5
24	29.9	29.9	232420	18.5	18.3	185	5
25	29.9	29.9	237940	19	18.9	185	5
26	29.9	29.9	242650	19.5	19.4	185	5
27	29.9	29.9	247810	20	19.9	185	5
28	29.9	29.9	255240	21	20.9	186	5
29	29.9	29.9	265820	22.2	22.1	185	5
30	29.9	29.9	273860	23.2	23.2	185	5
31	29.9	29.9	278430	24	23.9	186	5
32	29.9	29.9	285740	25	25	186	6
33	29.9	29.9	292850	26	26.1	187	6
34	29.9	29.9	298410	27	27	187	6
35	29.9	29.9	304400	28	28.1	187	6
36	29.9	29.9	309360	29	29	187	7
37	29.9	29.9	315770	30.1	30.3	187	7
38	29.9	29.9	321610	31.3	31.5	187	7
39	29.9	29.9	324680	32	32.2	187	7
40	29.9	29.9	329600	33	33.4	187	7
41	29.9	29.9	333470	34	34.3	188	7
42	29.9	29.9	337360	35	35.3	188	7
43	29.9	29.9	341590	36	36.4	188	7
44	29.9	29.9	345680	37	37.7	188	8
45	29.9	29.9	349200	38	38.6	189	8
46	29.9	29.9	352170	39	39.5	189	9
47	29.9	29.9	355490	40	40.6	189	9
48	29.9	29.9	358570	41	41.7	189	9
49	29.9	29.9	361760	42	42.8	189	9
50	29.9	29.9	364550	43	43.9	189	9

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	29.9	29.9	367640	44	45	190	9
52	29.9	29.9	370500	45	46	190	9
53	29.9	29.9	373290	46	47.2	190	9
54	29.9	29.9	375890	47	48.3	190	9
55	29.9	29.9	378260	48	49.3	190	9
56	29.9	29.9	380320	49	50.3	190	9
57	29.9	29.9	382820	50	51.5	190	10
58	29.9	29.9	385260	51	52.6	190	10
59	29.9	29.9	387430	52	53.6	190	10
60	29.9	29.9	389510	53	54.6	190	10
61	29.9	29.9	391490	54	55.5	190	10
62	29.9	29.9	393330	55	56.5	190	10
63	29.9	29.9	395250	56	57.4	190	10
64	29.9	29.9	397240	57	58.6	191	10



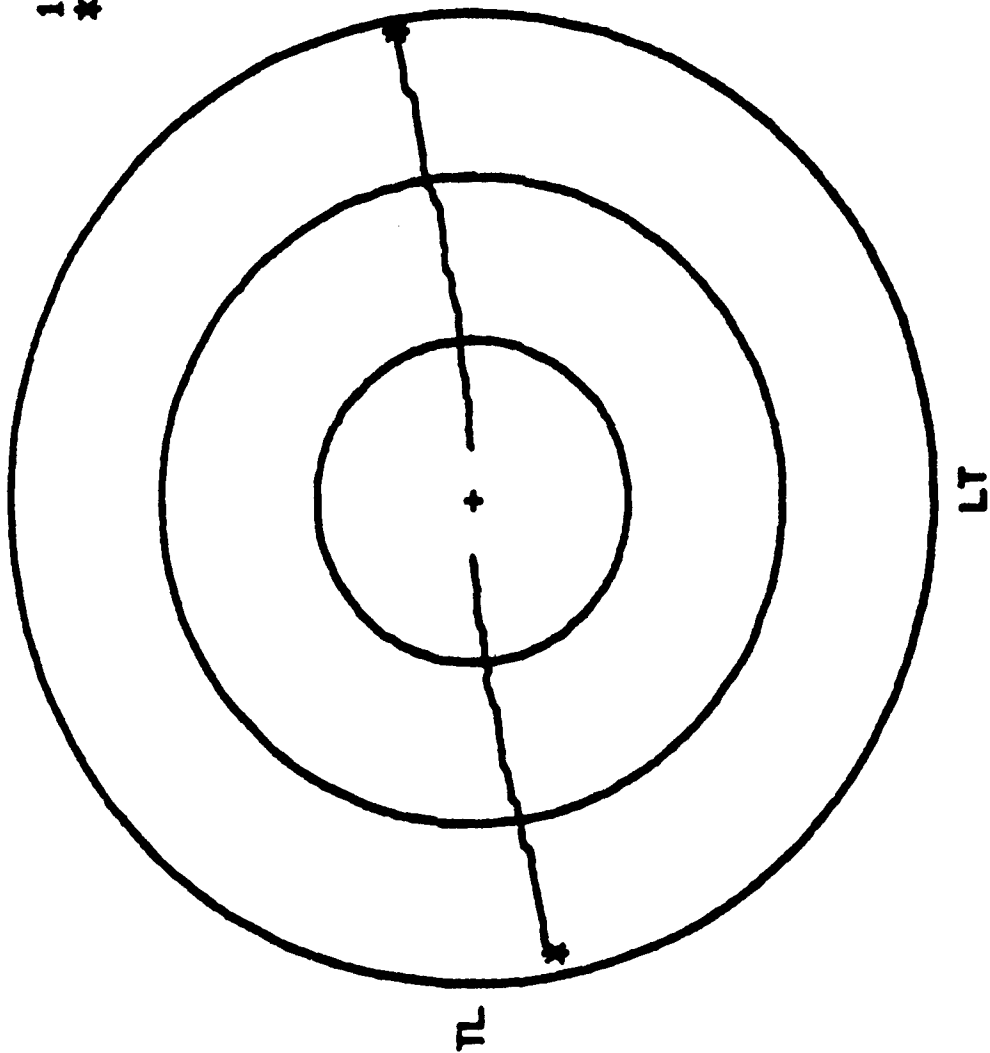
SPECIMEN 7-111 TEST CASE 47



SPECIMEN 7-111

TEST CASE 47

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7875-T7 TEST CASE 48 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-105 FLAW TYPE - 1

TEMP = 74 F

REL HUM = 42 %

7-7-77

B = .177 IN

R(L) = .7

R(T) = .7

FREQ = 5 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

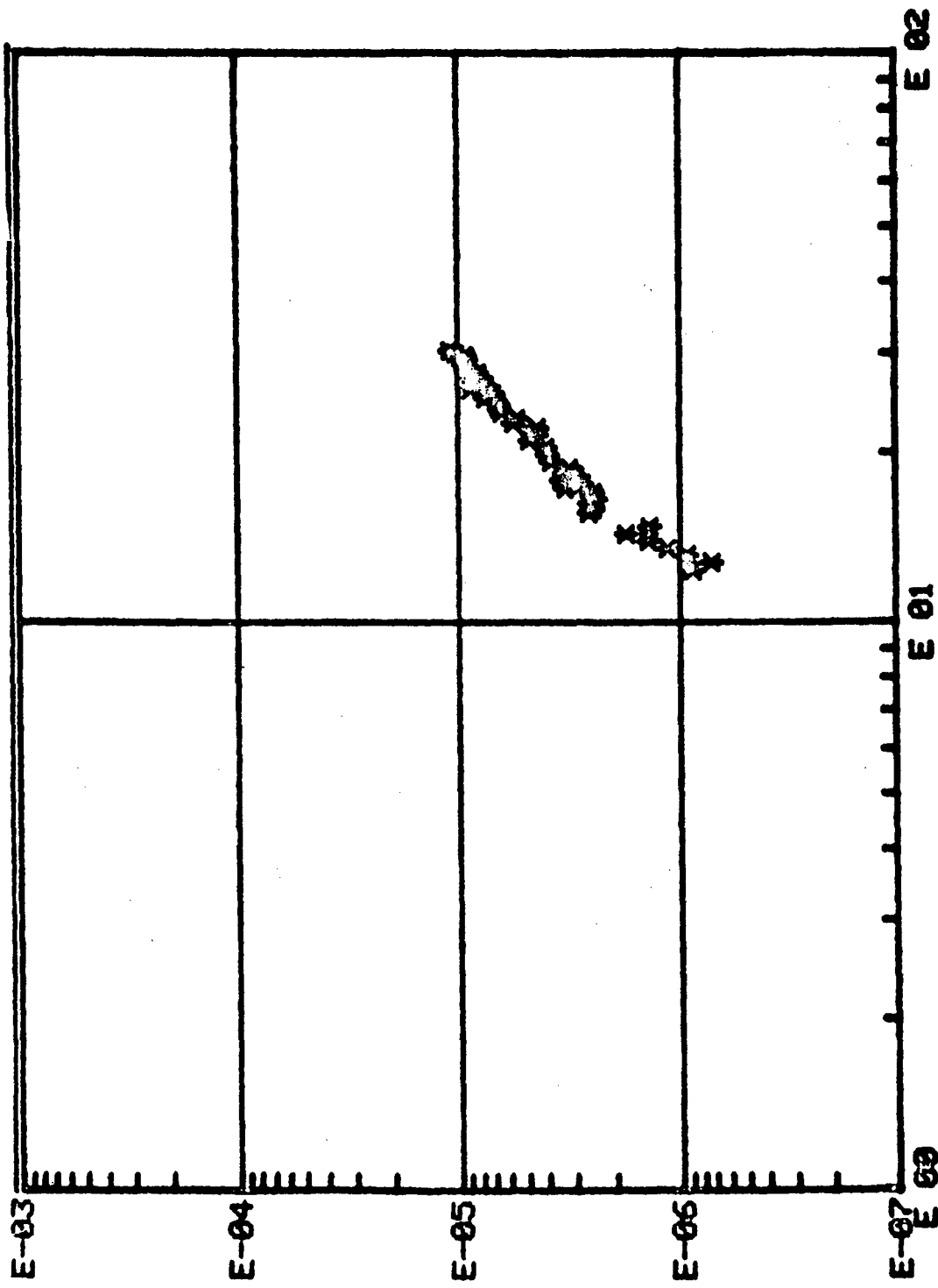
BIAXIAL RATIO = -1  
-----

THIS SPECIMEN WAS ACCIDENTALLY OVERLOADED 2 SEPARATE TIMES  
APPROXIMATELY 25%. AFTER EACH EVENT THE CRACK WAS  
GROWN THROUTH THE PLASTIC ZONE AND THE COUNTER THEN REZEROED

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.4	-17.4	0	6.6	6.5	188	0
2	17.4	-17.4	28310	7.1	7	179	0
3	17.4	-17.4	59270	7.5	7.5	179	0
4	17.4	-17.4	86000	8	8	179	0
5	17.4	-17.4	105770	8.4	8.5	179	0
6	17.4	-17.4	123690	8.9	9	179	0
7	17.4	-17.4	139430	9.5	9.5	178	0
8	17.4	-17.4	157620	10	10	178	0
9	17.4	-17.4	0	10.8	10.7	178	0
10	17.4	-17.4	5800	11.1	11	178	0
11	17.4	-17.4	15900	11.6	11.5	178	0
12	17.4	-17.4	24660	12	12	179	0
13	17.4	-17.4	36150	12.6	12.5	179	0
14	17.4	-17.4	46350	13.1	13	179	0
15	17.4	-17.4	53960	13.6	13.5	179	0
16	17.4	-17.4	62950	14.1	14	179	0
17	17.4	-17.4	70290	14.6	14.5	179	0
18	17.4	-17.4	77810	15	15	179	0
19	17.4	-17.4	94390	16.1	16	179	0
20	17.4	-17.4	107600	17.1	17	179	0
21	17.4	-17.4	120940	18.2	18	179	-1
22	17.4	-17.4	133370	19.2	19	179	-1
23	17.4	-17.4	143950	20.2	20	179	-1
24	17.4	-17.4	153510	21.1	20.8	179	-1
25	17.4	-17.4	0	21.3	21.3	179	-1
26	17.4	-17.4	9220	22.2	22	179	-1
27	17.4	-17.4	18560	23.3	23	179	-1
28	17.4	-17.4	27820	24.3	24	179	-1
29	17.4	-17.4	35770	25.3	25	179	-1
30	17.4	-17.4	43460	26.3	26	179	-1
31	17.4	-17.4	50920	27.3	27	179	-1
32	17.4	-17.4	57900	28.4	28	179	-1
33	17.4	-17.4	66130	29.6	29.1	179	-1
34	17.4	-17.4	71250	30.5	30	179	-1
35	17.4	-17.4	77540	31.4	31	179	-1
36	17.4	-17.4	83800	32.4	32	179	-1
37	17.4	-17.4	89870	33.4	33	179	-1
38	17.4	-17.4	96260	34.5	34	179	-1
39	17.4	-17.4	101700	35.5	35	179	-1
40	17.4	-17.4	107250	36.5	36	179	-1
41	17.4	-17.4	112510	37.5	37	179	-1
42	17.4	-17.4	117950	38.5	38	179	-1
43	17.4	-17.4	122770	39.3	39	179	-1
44	17.4	-17.4	127610	40.3	40	179	-1
45	17.4	-17.4	132220	41.3	41	179	-1

# TEST CASE 48

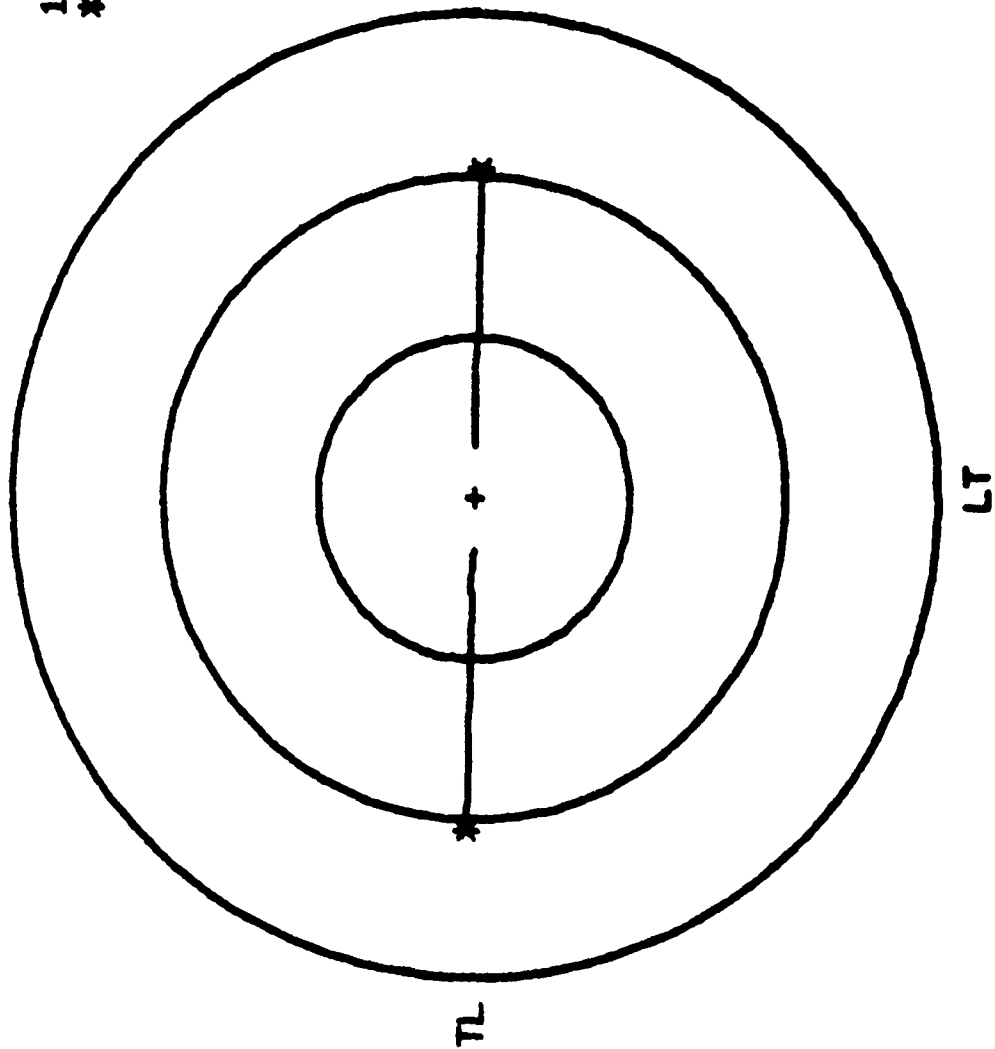
SPECIMEN 7-105



SPECIMEN 7-105

TEST CASE 48

1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 49 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-96 FLAW TYPE - 1

TEMP = 73 F

REL HUM = 44 %

09/14/77

B = .176 IN

R(L) = .7

R(T) = .7

FREQ = 10 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

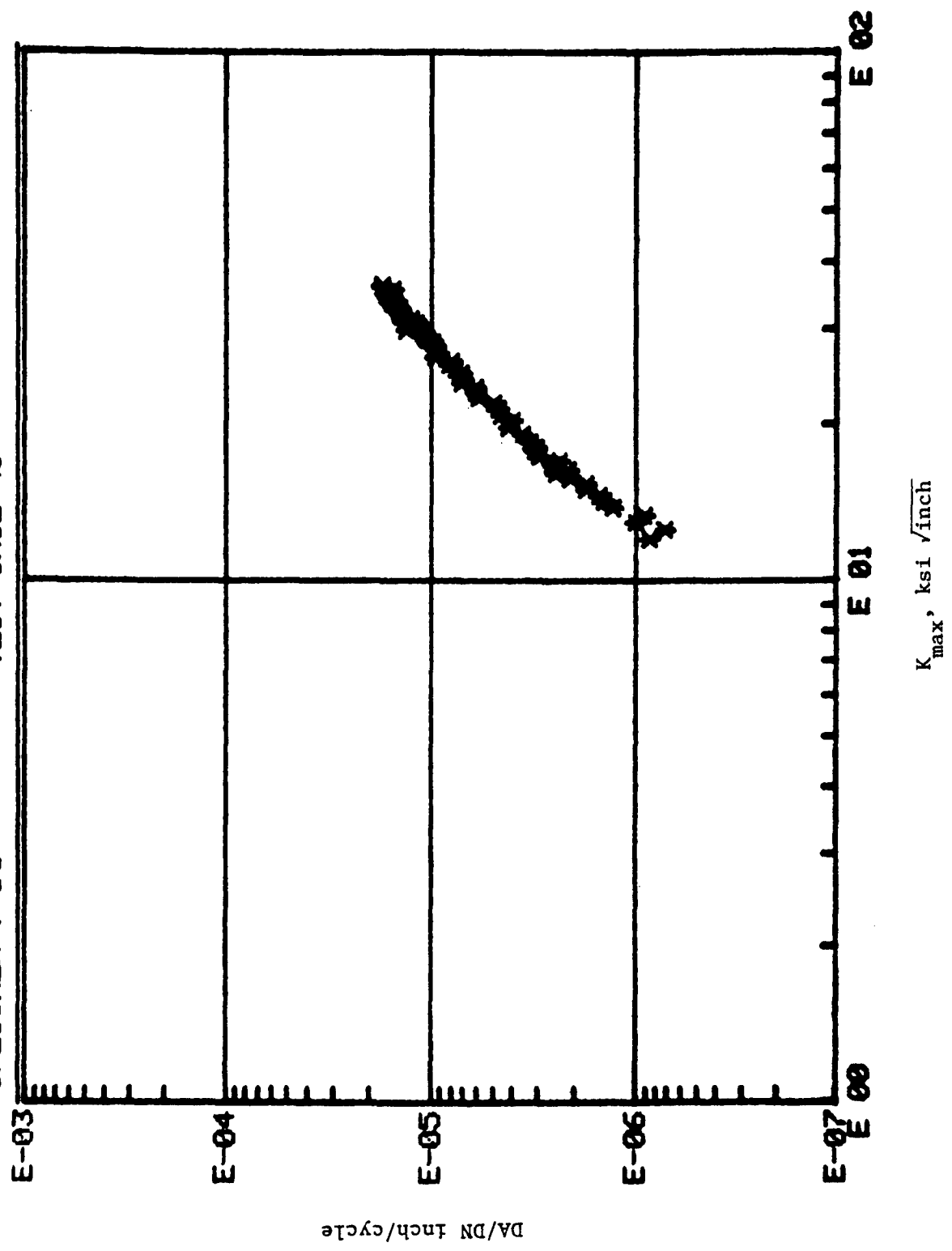
BIAXIAL RATIO = .5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	26.76	18.09	0	6.5	6.1	180	2
2	26.76	18.09	26300	7	6.5	180	2
3	26.76	18.09	64160	7.5	7.1	180	1
4	26.76	18.09	89100	8	7.6	180	1
5	26.76	18.09	113940	8.5	8	180	1
6	26.76	18.09	135000	9	8.6	180	1
7	26.76	18.09	152500	9.5	9.1	180	1
8	26.76	18.09	168900	10	9.6	180	1
9	26.76	18.09	183200	10.5	10.1	180	1
10	26.76	18.09	197560	11	10.6	180	1
11	26.76	18.09	210590	11.6	11.1	180	0
12	26.76	18.09	219600	12	11.6	180	0
13	26.76	18.09	230210	12.5	12	180	0
14	26.76	18.09	239910	13	12.5	180	0
15	26.76	18.09	250530	13.5	13	180	1
16	26.76	18.09	258990	14	13.5	180	0
17	26.76	18.09	267110	14.5	14	180	0
18	26.76	18.09	275240	15	14.5	180	0
19	26.76	18.09	290530	16	15.5	180	0
20	26.76	18.09	304510	17	16.5	180	1
21	26.76	18.09	315870	18	17.4	180	0
22	26.76	18.09	329030	19	18.5	180	0
23	26.76	18.09	338830	20	19.3	180	0
24	26.76	18.09	352110	21.2	20.6	180	0
25	26.76	18.09	359700	22	21.3	180	0
26	26.76	18.09	369830	23.2	22.5	180	0
27	26.76	18.09	377630	24.1	23.5	180	0
28	26.76	18.09	386250	25.1	24.6	180	0
29	26.76	18.09	392600	26	25.5	180	0
30	26.76	18.09	400100	27	26.6	180	0
31	26.76	18.09	407150	28	27.6	180	0
32	26.76	18.09	413670	29	28.6	180	0
33	26.76	18.09	419770	30	29.6	180	0
34	26.76	18.09	426360	31	30.7	181	0
35	26.76	18.09	431870	32	31.8	181	0
36	26.76	18.09	437300	33	32.8	181	0
37	26.76	18.09	440200	35	35	181	1
38	26.76	18.09	453740	36.1	36.1	181	1
39	26.76	18.09	458030	37	37	181	1
40	26.76	18.09	462700	38	38	181	1
41	26.76	18.09	467910	39	39.3	181	1
42	26.76	18.09	471500	40	40.2	181	1
43	26.76	18.09	476700	41.2	41.4	181	1
44	26.76	18.09	481350	42.3	42.5	181	1
45	26.76	18.09	484130	43	43.3	181	1
46	26.76	18.09	488100	44	44.3	181	1
47	26.76	18.09	492000	45	45.5	181	1
48	26.76	18.09	495500	46	46.5	181	1
49	26.76	18.09	499000	47	47.5	181	1
50	26.76	18.09	502650	48	48.6	181	1



REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	26.76	18.09	506700	49.1	49.9	181	1
52	26.76	18.09	509600	50	50.8	181	1
53	26.76	18.09	512900	51	51.8	181	1
54	26.76	18.09	516000	52	52.8	181	1
55	26.76	18.09	519050	53	53.8	181	1
56	26.76	18.09	522210	54	54.9	181	1
57	26.76	18.09	525340	55	55.9	181	1
58	26.76	18.09	528740	56	57	181	1
59	26.76	18.09	531590	57	58	181	1
60	26.76	18.09	534370	58	58.9	181	1

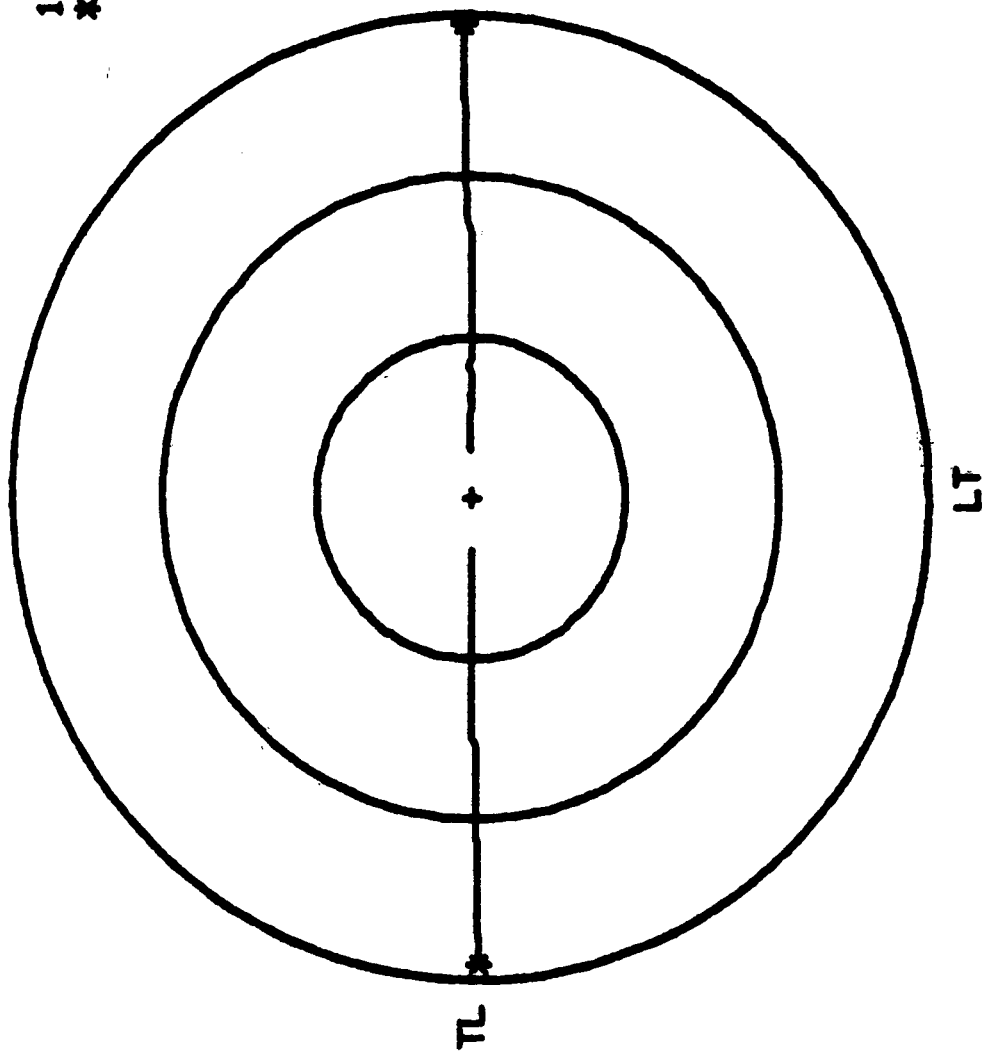
SPECIMEN 7-96 TEST CASE 49



SPECIMEN 7-96

TEST CASE 49

1 IN SPACING  
\* TEST STOPPED

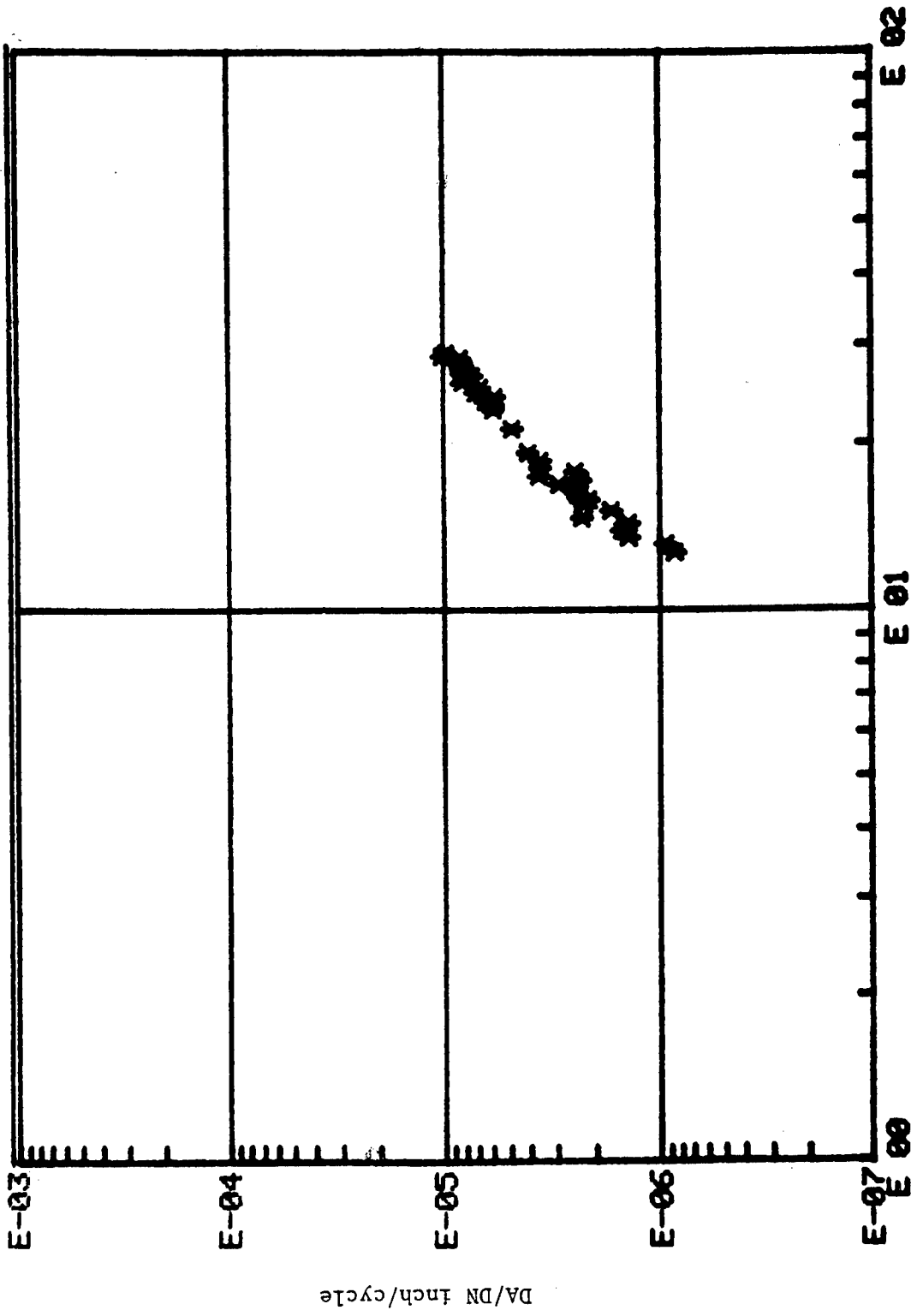


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CRACK GROWTH TEST OF 7075-T7 TEST CASE 50 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-39 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 55 % 11-17-77  
B = .171 IN R(L) = .7 R(T) = .7  
FREQ = 8 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	20.54	-5.49	0	7	6.9	180	0
2	20.54	-5.49	29340	7.5	7.4	180	0
3	20.54	-5.49	55650	8	7.9	180	0
4	20.54	-5.49	73620	8.5	8.4	180	0
5	20.54	-5.49	90330	9	8.9	180	0
6	20.54	-5.49	106560	9.5	9.3	180	0
7	20.54	-5.49	117490	10	9.8	180	0
8	20.54	-5.49	132360	10.5	10.3	180	0
9	20.54	-5.49	144690	11	10.9	180	0
10	20.54	-5.49	156320	11.5	11.4	180	0
11	20.54	-5.49	166760	12	11.9	180	0
12	20.54	-5.49	175880	12.5	12.3	180	0
13	20.54	-5.49	184400	13	12.8	180	0
14	20.54	-5.49	194120	13.5	13.2	180	0
15	20.54	-5.49	201710	14	13.8	180	0
16	20.54	-5.49	210890	14.5	14.2	180	0
17	20.54	-5.49	217220	15	14.6	180	0
18	20.54	-5.49	232530	16.1	15.7	180	0
19	20.54	-5.49	246760	17.3	16.8	180	0
20	20.54	-5.49	308820	23.4	22.7	180	1
21	20.54	-5.49	316000	24.2	23.6	180	1
22	20.54	-5.49	324090	25.2	24.5	180	1
23	20.54	-5.49	332210	26.3	25.5	180	1
24	20.54	-5.49	338650	27.1	26.2	180	1
25	20.54	-5.49	346010	28.2	27.2	180	1
26	20.54	-5.49	351890	29	28	180	1
27	20.54	-5.49	364140	31	30	180	1
28	20.54	-5.49	370230	32	30.8	180	1
29	20.54	-5.49	376030	33	31.7	180	1
30	20.54	-5.49	381950	34	32.6	180	1
31	20.54	-5.49	387720	35	33.5	180	1
32	20.54	-5.49	392710	36	34.2	180	1
33	20.54	-5.49	399230	37	35.4	180	1
34	20.54	-5.49	403440	38	36.1	180	1
35	20.54	-5.49	408340	39	37	180	1

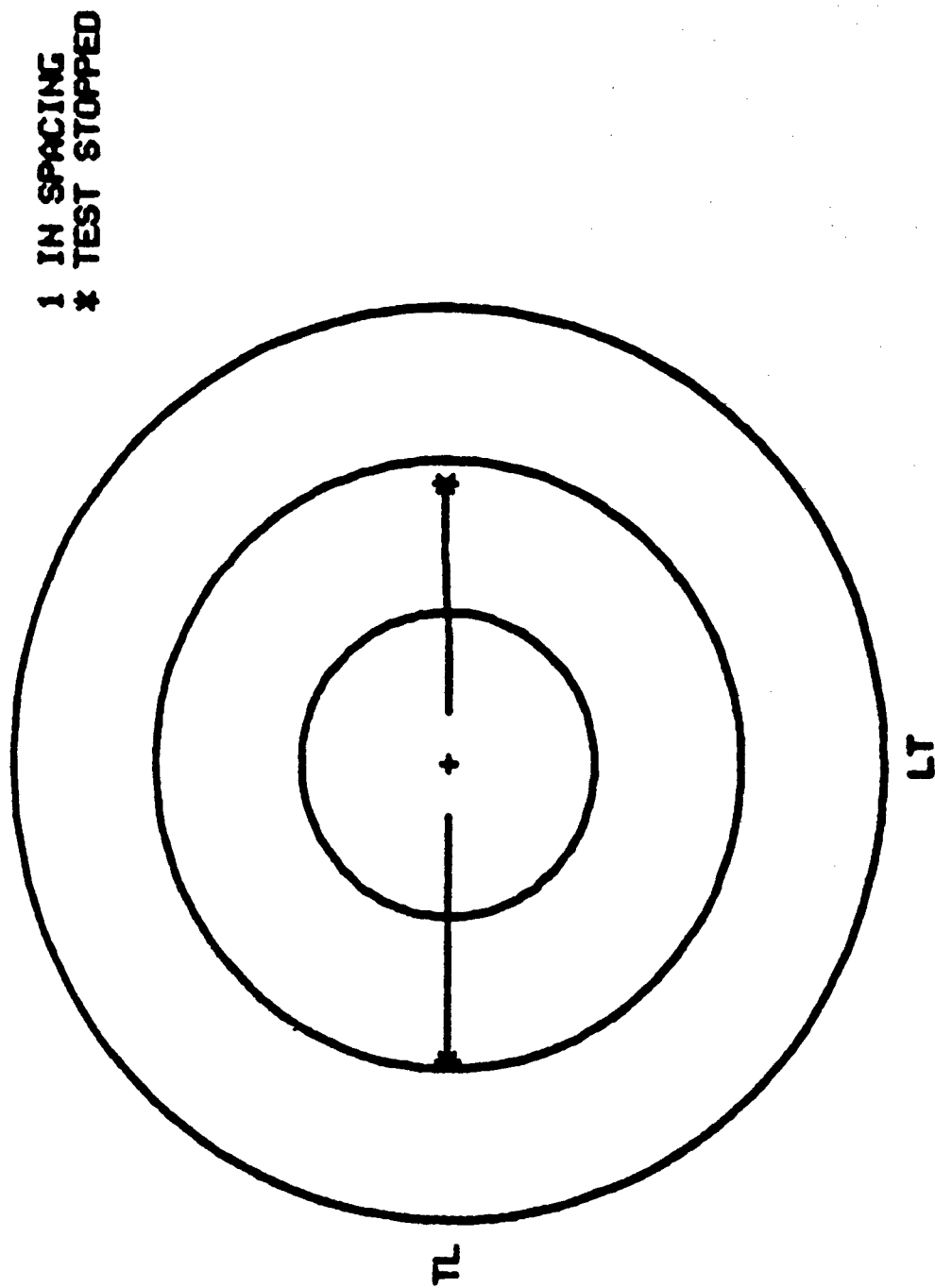
# SPECIMEN 7-39 TEST CASE 50

E-03



SPECIMEN 7-39

TEST CASE 50



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 11 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-51 FLAW TYPE - 7

TEMP = 74 F

REL HUM = 51 %

2-28-78

B = .183 IN

R(L) = .7

R(T) = .7

FREQ = 15 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

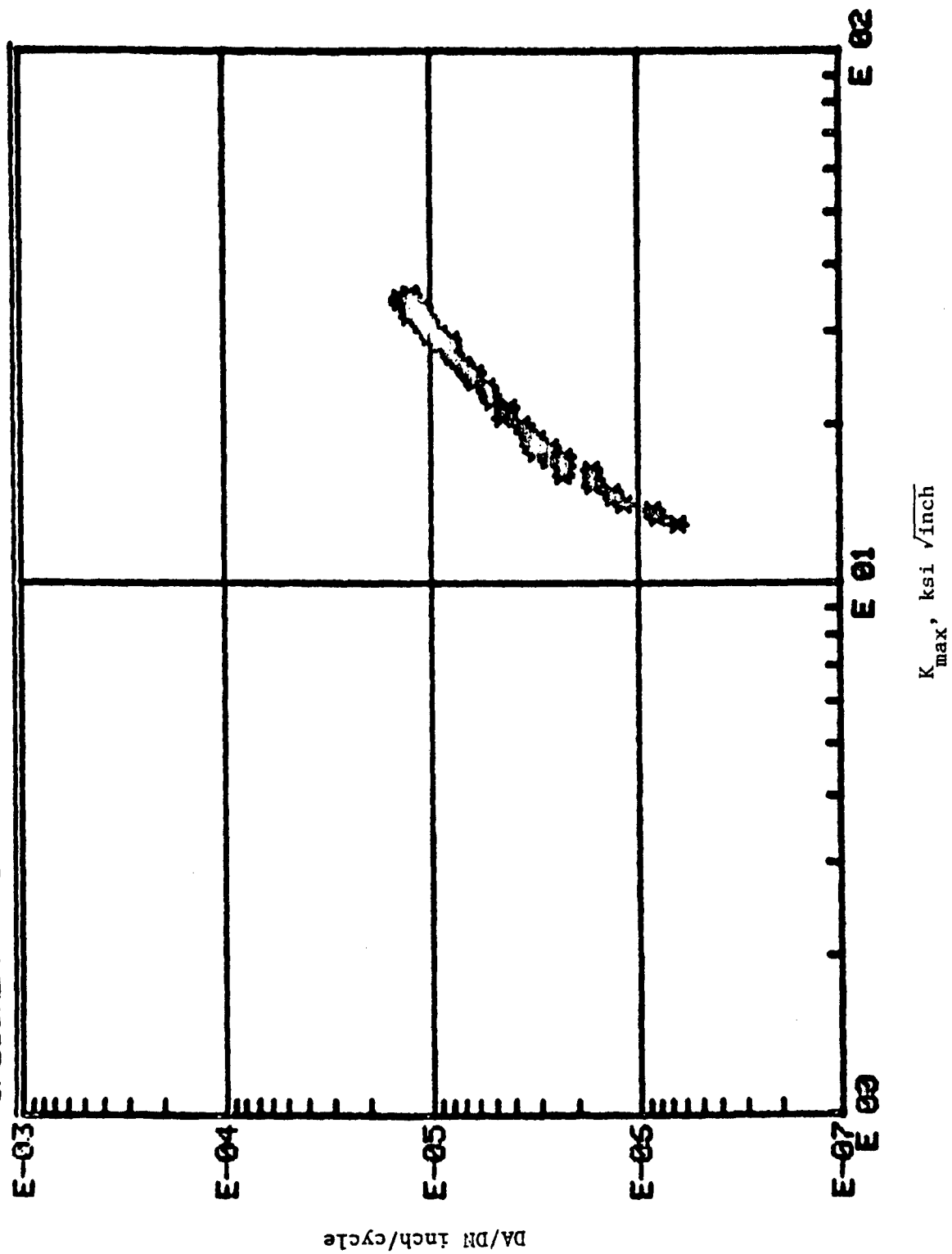
BIAXIAL RATIO = 0  
-----



REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	23.65	6.3	0	7	7.3	179	-1
2	23.65	6.3	42450	7.5	7.9	179	-1
3	23.65	6.3	73310	8	8.4	179	-1
4	23.65	6.3	99400	8.5	8.8	178	-1
5	23.65	6.3	120550	9	9.3	178	-2
6	23.65	6.3	139650	9.5	9.8	178	-2
7	23.65	6.3	154640	9.9	10.2	178	-2
8	23.65	6.3	174150	10.5	10.9	178	-2
9	23.65	6.3	186490	11	11.2	178	-2
10	23.65	6.3	199540	11.5	11.9	178	-2
11	23.65	6.3	211460	12	12.2	178	-2
12	23.65	6.3	225830	12.5	13	178	-2
13	23.65	6.3	234200	13	13.4	178	-2
14	23.65	6.3	246410	13.5	14	178	-2
15	23.65	6.3	253680	14	14.4	178	-2
16	23.65	6.3	264070	14.5	15	178	-2
17	23.65	6.3	267860	14.8	15.2	178	-2
18	23.65	6.3	287400	16	16.4	178	-2
19	23.65	6.3	301300	17	17.3	178	-2
20	23.65	6.3	315840	18	18.3	178	-2
21	23.65	6.3	326150	19	19.3	178	-2
22	23.65	6.3	335960	19.9	20.1	178	-2
23	23.65	6.3	349050	21	21.2	178	-2
24	23.65	6.3	359470	22	22.3	178	-3
25	23.65	6.3	369720	23	23.4	178	-3
26	23.65	6.3	379050	24	24.4	178	-3
27	23.65	6.3	388010	25	25.3	178	-3
28	23.65	6.3	395840	26	26.2	178	-3
29	23.65	6.3	403730	27	27.2	178	-3
30	23.65	6.3	412000	28	28.2	178	-3
31	23.65	6.3	419390	29	29.2	178	-3
32	23.65	6.3	427670	30.1	30.4	178	-3
33	23.65	6.3	434110	31	31.4	178	-3
34	23.65	6.3	440850	32	32.5	178	-3
35	23.65	6.3	454850	34	34.7	178	-3
36	23.65	6.3	459690	35	35.5	178	-3
37	23.65	6.3	465390	36	36.5	178	-3
38	23.65	6.3	472580	37.1	37.7	178	-3
39	23.65	6.3	477320	38	38.7	178	-3
40	23.65	6.3	482570	39	39.6	178	-3
41	23.65	6.3	487280	40	40.5	178	-3
42	23.65	6.3	492550	41	41.6	178	-3
43	23.65	6.3	497090	42	42.6	178	-3
44	23.65	6.3	502540	43	43.8	178	-3
45	23.65	6.3	507710	44	45	178	-3
46	23.65	6.3	511470	45	45.9	178	-3
47	23.65	6.3	515870	46	47	178	-3
48	23.65	6.3	519850	47	47.9	178	-3
49	23.65	6.3	524570	48	49	178	-3
50	23.65	6.3	529140	49	50	178	-3

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	23.65	6.3	532990	50	51	178	-3
52	23.65	6.3	536580	51	52	178	-3
53	23.65	6.3	540250	52	53	178	-3
54	23.65	6.3	543850	53	54	178	-3
55	23.65	6.3	547930	54	55	178	-3
56	23.65	6.3	551890	55	56	178	-3

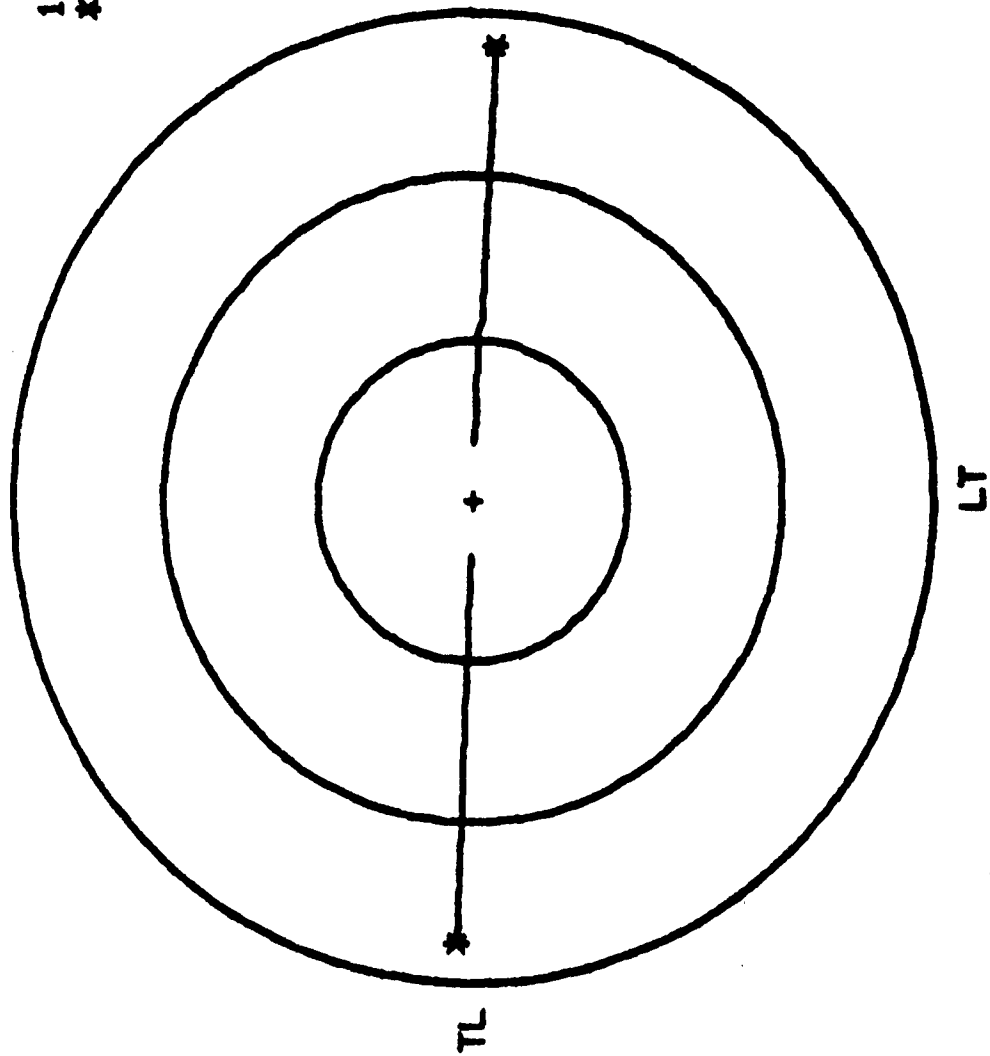
# SPECIMEN 7-51 TEST CASE 11



SPECIMEN 7-51

TEST CASE 11

1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 15 PAGE 1  
-----

CRUCIFORM SPECIMEN TYPE SPEC. 7-12 FLAW TYPE - 2  
-----

TEMP = 75 F

REL HUM = 58 %

8-16-78  
-----

B = .178 IN

R(L) = .7

R(T) = .7  
-----

FREQ = 5 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN  
-----

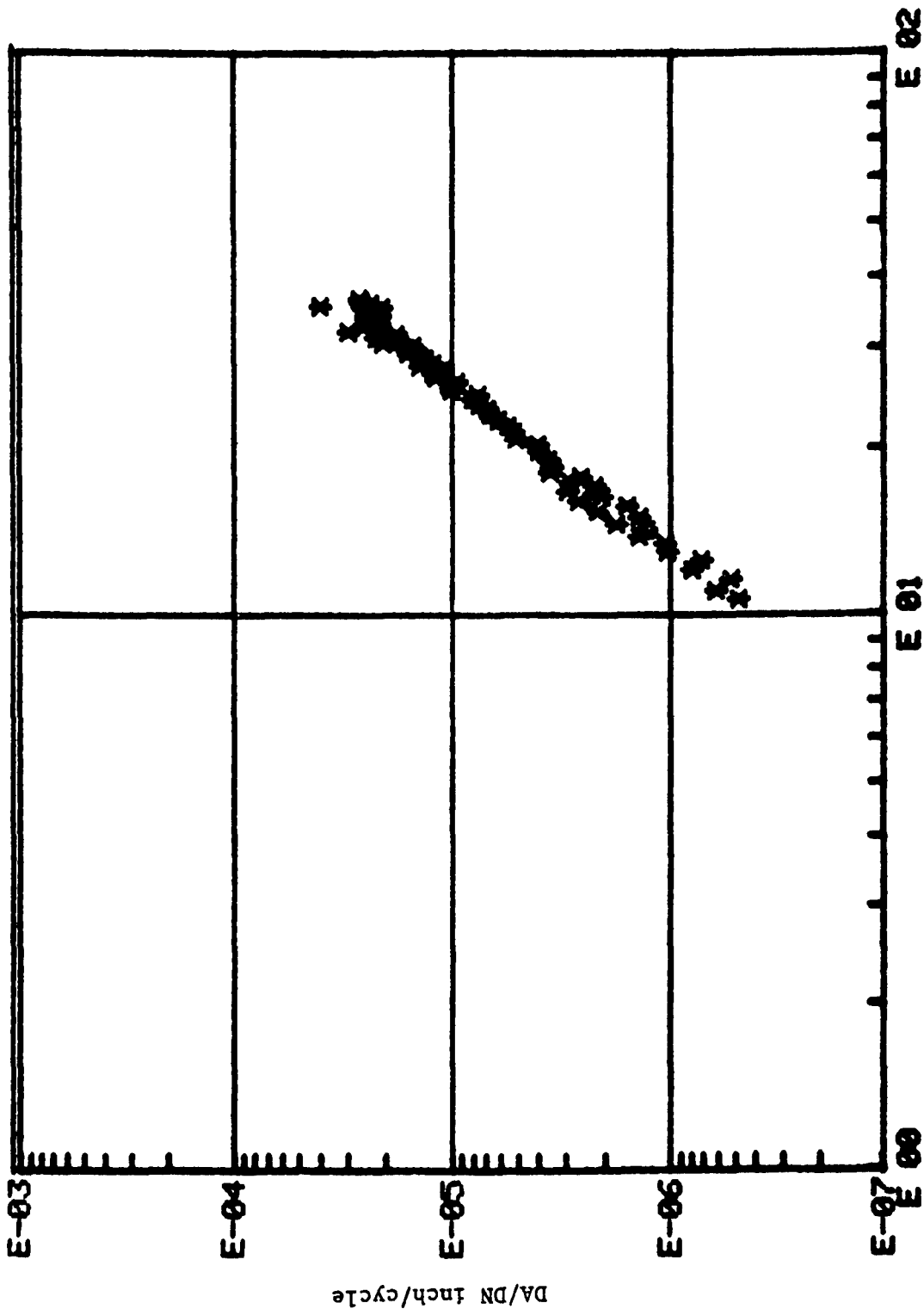
BIAXIAL RATIO = 0  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	6.3	23.65	0	5	4.7	272	90
2	6.3	23.65	41240	5.5	5	271	91
3	6.3	23.65	81940	6	5.5	271	90
4	6.3	23.65	129110	6.5	6	271	90
5	6.3	23.65	160520	7	6.5	271	90
6	6.3	23.65	190630	7.5	7.1	270	90
7	6.3	23.65	225380	8	7.7	270	90
8	6.3	23.65	246430	8.5	8.1	270	90
9	6.3	23.65	266240	9	8.7	270	90
10	6.3	23.65	281750	9.5	9	270	90
11	6.3	23.65	297120	10	9.6	270	90
12	6.3	23.65	313220	10.5	10	270	90
13	6.3	23.65	324800	11	10.5	270	90
14	6.3	23.65	340500	11.5	11	270	90
15	6.3	23.65	350800	12	11.5	270	90
16	6.3	23.65	362110	12.5	12	270	90
17	6.3	23.65	372280	13	12.7	270	89
18	6.3	23.65	381290	13.5	13	270	89
19	6.3	23.65	389900	14	13.5	270	89
20	6.3	23.65	399610	14.5	14	269	89
21	6.3	23.65	405940	15	14.4	268	89
22	6.3	23.65	420280	16	15.4	268	89
23	6.3	23.65	434750	17	16.5	268	89
24	6.3	23.65	447170	18	17.5	269	89
25	6.3	23.65	460160	19	18.6	269	89
26	6.3	23.65	469430	20	19.5	269	90
27	6.3	23.65	479440	21	20.6	269	90
28	6.3	23.65	488830	22	21.7	269	90
29	6.3	23.65	496550	23	22.6	269	90
30	6.3	23.65	504360	24	23.7	269	90
31	6.3	23.65	511990	25	24.8	269	89
32	6.3	23.65	518340	26	25.7	269	89
33	6.3	23.65	524820	27	26.8	269	89
34	6.3	23.65	531370	28	27.8	269	89
35	6.3	23.65	536080	29	28.7	269	89
36	6.3	23.65	541290	30	29.8	269	89
37	6.3	23.65	546010	31	30.6	269	89
38	6.3	23.65	550660	32	31.8	269	89
39	6.3	23.65	554760	33	32.8	269	89
40	6.3	23.65	558990	34	33.7	269	89
41	6.3	23.65	562920	35	34.9	269	89
42	6.3	23.65	567020	36	35.9	269	89
43	6.3	23.65	570600	37	36.8	269	89
44	6.3	23.65	574330	38	37.9	269	89
45	6.3	23.65	577660	39	39	269	89
46	6.3	23.65	580790	40	40	269	89
47	6.3	23.65	584260	41	41.1	269	89
48	6.3	23.65	586670	42	42.1	269	89
49	6.3	23.65	589390	43	43	269	89
50	6.3	23.65	591650	44	44	268	89

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	6.3	23.65	594990	45.2	45.2	268	89
52	6.3	23.65	596340	46	46	268	89
53	6.3	23.65	598550	47	47	269	89
54	6.3	23.65	600530	48	48	269	89
55	6.3	23.65	602720	49	48.9	269	89
56	6.3	23.65	605080	50	50	269	89
57	6.3	23.65	606920	51	50.8	269	89
58	6.3	23.65	609140	52	51.7	269	89
59	6.3	23.65	611390	53	52.9	269	89
60	6.3	23.65	613660	54	53.9	269	89
61	6.3	23.65	615350	55	54.5	269	89
62	6.3	23.65	617490	56	55.3	269	89
63	6.3	23.65	618560	57	56	269	89
64	6.3	23.65	620670	58	57	269	89
65	6.3	23.65	622600	59	58	269	89
66	6.3	23.65	624780	60	59.3	269	89

# SPECIMEN 7-12 TEST CASE 15

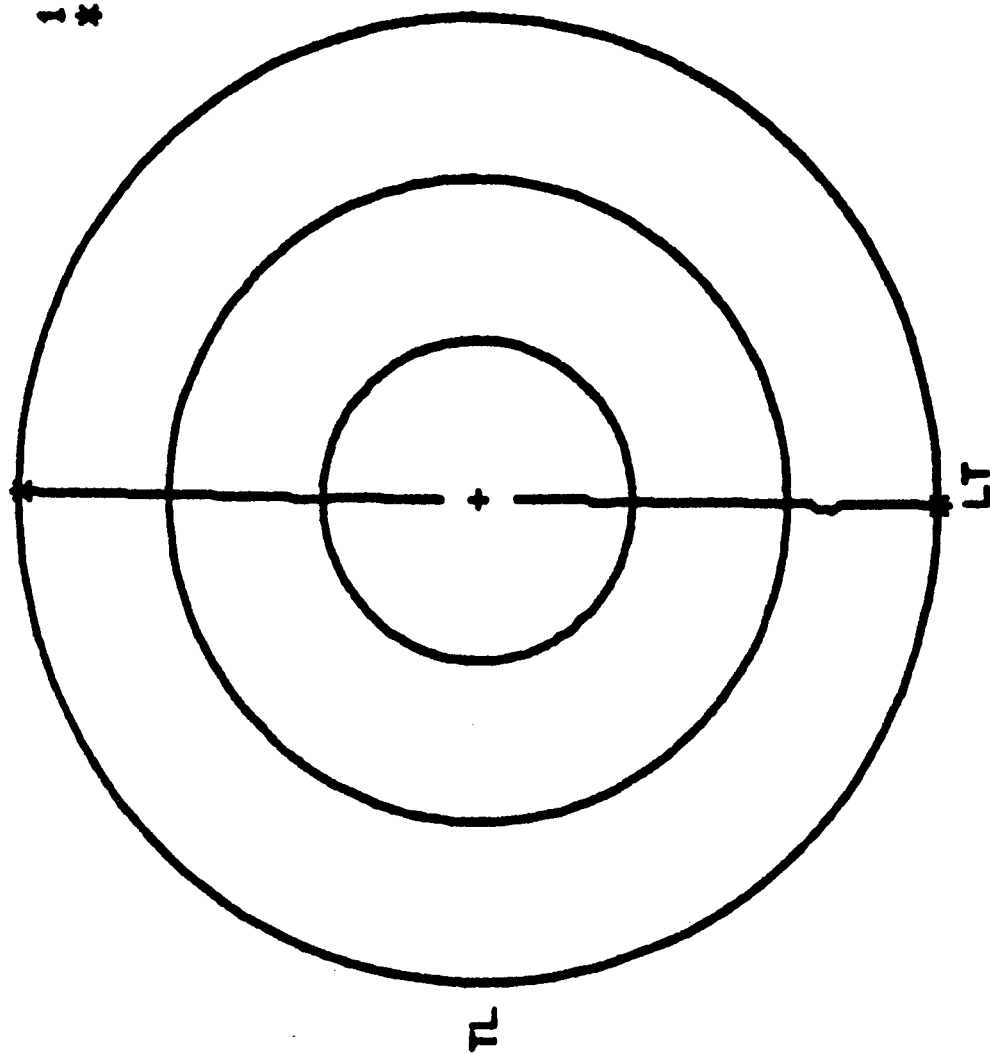
E-03





SPECIMEN 7-12

TEST CASE 15



1 IN SPACING  
\* TEST STOPPED

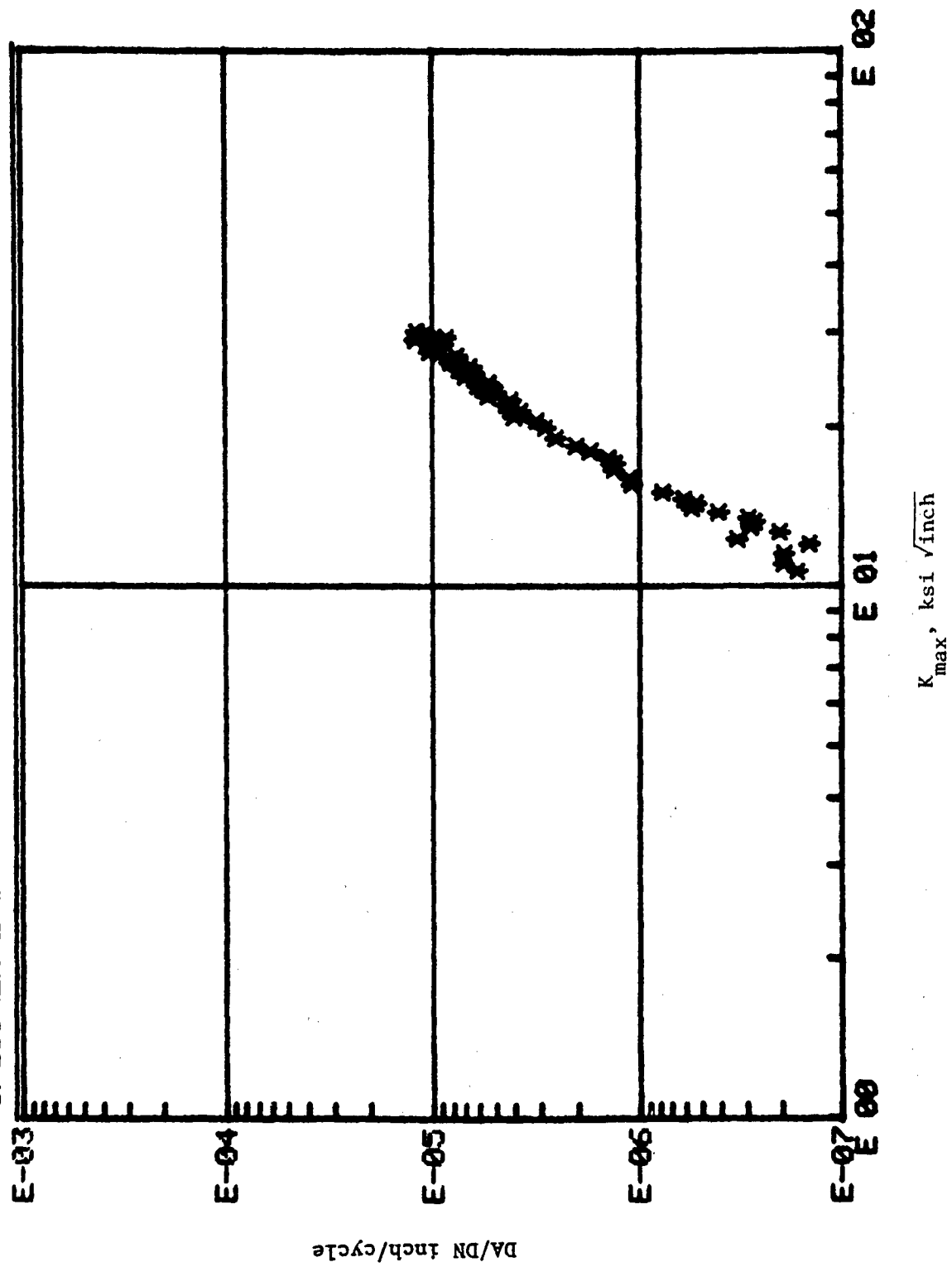
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CRACK GROWTH TEST OF 2024-T3 TEST CASE 51 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-29 FLAW TYPE - 1  
TEMP = 80 F REL HUM = 45 % 10-11-77  
B = .176 IN R(L) = .7 R(T) = .7  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = 1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	24.89	24.89	0	7	7	181	0
2	24.89	24.89	149390	7.5	7.5	182	0
3	24.89	24.89	275430	8	8	184	1
4	24.89	24.89	533940	9	9	185	3
5	24.89	24.89	688470	9.5	9.4	185	3
6	24.89	24.89	771080	10	10	185	4
7	24.89	24.89	881100	10.5	10.4	186	4
8	24.89	24.89	977660	11	11	187	5
9	24.89	24.89	1.05049E+06	11.5	11.3	187	5
10	24.89	24.89	1.13580E+06	12	11.8	187	6
11	24.89	24.89	1.20235E+06	12.5	12.4	187	7
12	24.89	24.89	1.24711E+06	13	12.9	188	8
13	24.89	24.89	1.29406E+06	13.5	13.4	188	9
14	24.89	24.89	1.33484E+06	14	13.9	189	9
15	24.89	24.89	1.40217E+06	15	15	190	10
16	24.89	24.89	1.44598E+06	16	15.9	192	10
17	24.89	24.89	1.49257E+06	17	17	193	12
18	24.89	24.89	1.53923E+06	18.1	18.4	194	12
19	24.89	24.89	1.57149E+06	19	19.2	194	13
20	24.89	24.89	1.60840E+06	20	20.3	195	13
21	24.89	24.89	1.63602E+06	21	21.2	197	14
22	24.89	24.89	1.66455E+06	22.1	22.4	197	15
23	24.89	24.89	1.70676E+06	24	24.8	198	16
24	24.89	24.89	1.74208E+06	26	26.9	199	17
25	24.89	24.89	1.75963E+06	27	28	200	18
26	24.89	24.89	1.77470E+06	28.2	29.2	200	18
27	24.89	24.89	1.78609E+06	29	30.1	200	19
28	24.89	24.89	1.79804E+06	30	31.1	201	19
29	24.89	24.89	1.80897E+06	31	32	201	19
30	24.89	24.89	1.82089E+06	32	33	201	19
31	24.89	24.89	1.83099E+06	33	34.2	201	19
32	24.89	24.89	1.84306E+06	34	35.6	202	20
33	24.89	24.89	1.85397E+06	35.1	37	202	20
34	24.89	24.89	1.86100E+06	36	37.8	202	20
35	24.89	24.89	1.87001E+06	37	38.9	203	21
36	24.89	24.89	1.87923E+06	38	40	203	21
37	24.89	24.89	1.88644E+06	39	41	203	21
38	24.89	24.89	1.89442E+06	40	42	203	21
39	24.89	24.89	1.90384E+06	41.2	43.6	203	21
40	24.89	24.89	1.90874E+06	42	44.1	203	22
41	24.89	24.89	1.91555E+06	43	45.1	204	22
42	24.89	24.89	1.92163E+06	44	46.1	204	22
43	24.89	24.89	1.92785E+06	45	47.1	204	22
44	24.89	24.89	1.94222E+06	47	49.5	205	23
45	24.89	24.89	1.94756E+06	48	50.7	205	23
46	24.89	24.89	1.95279E+06	49	51.8	205	23
47	24.89	24.89	1.95846E+06	50	52.9	206	23
48	24.89	24.89	1.96391E+06	51	54	206	23
49	24.89	24.89	1.96950E+06	52.1	55	207	24
50	24.89	24.89	1.97388E+06	53	56.2	207	24

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	24.89	24.89	1.97911E+06	54	57	207	24
52	24.89	24.89	1.98372E+06	55	58	207	24
53	24.89	24.89	1.98840E+06	56	59	207	25
54	24.89	24.89	1.99261E+06	57	60	208	25

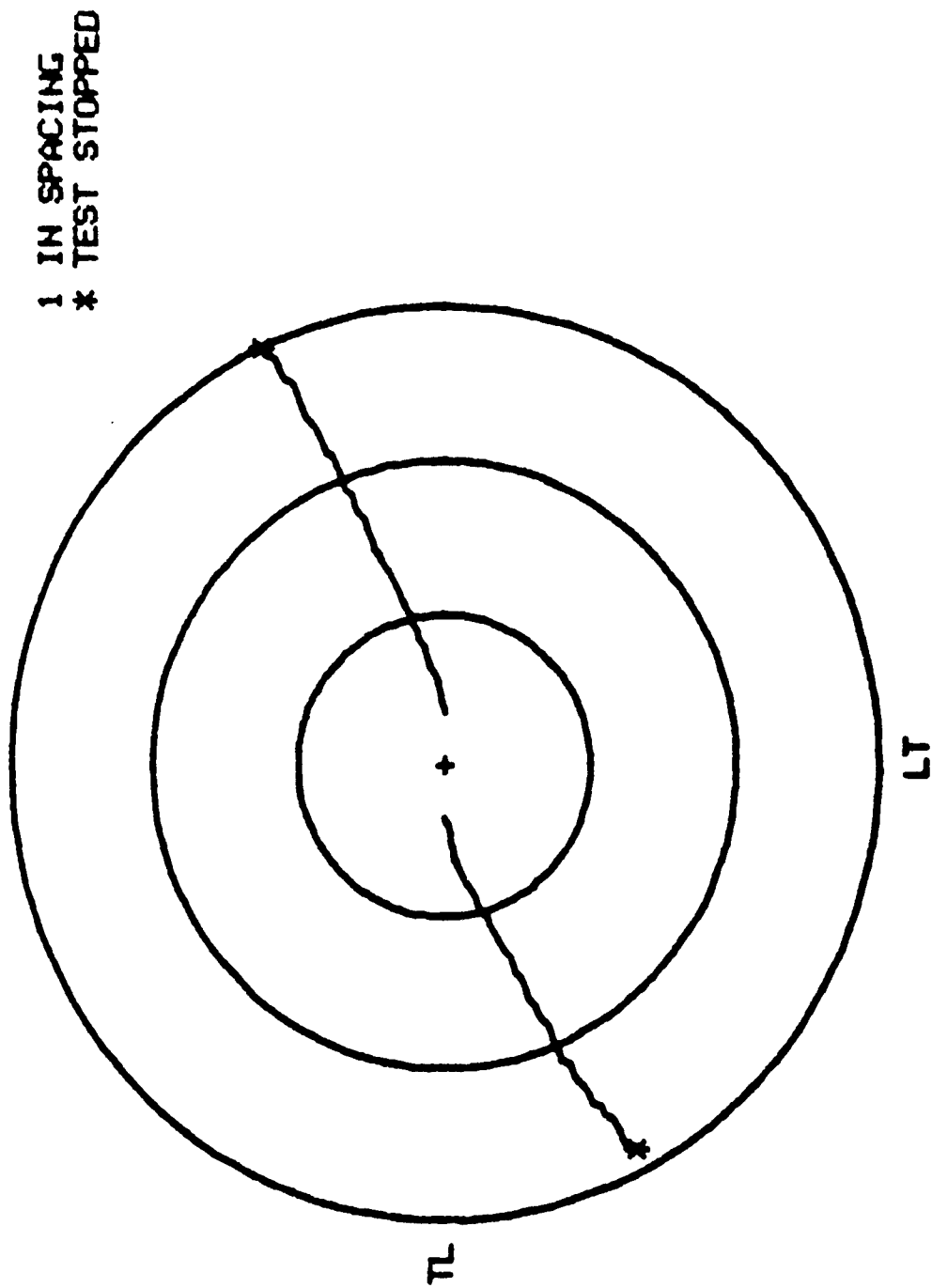
**SPECIMEN 2-28**

**TEST CASE 51**



SPECIMEN 2-29

TEST CASE 51



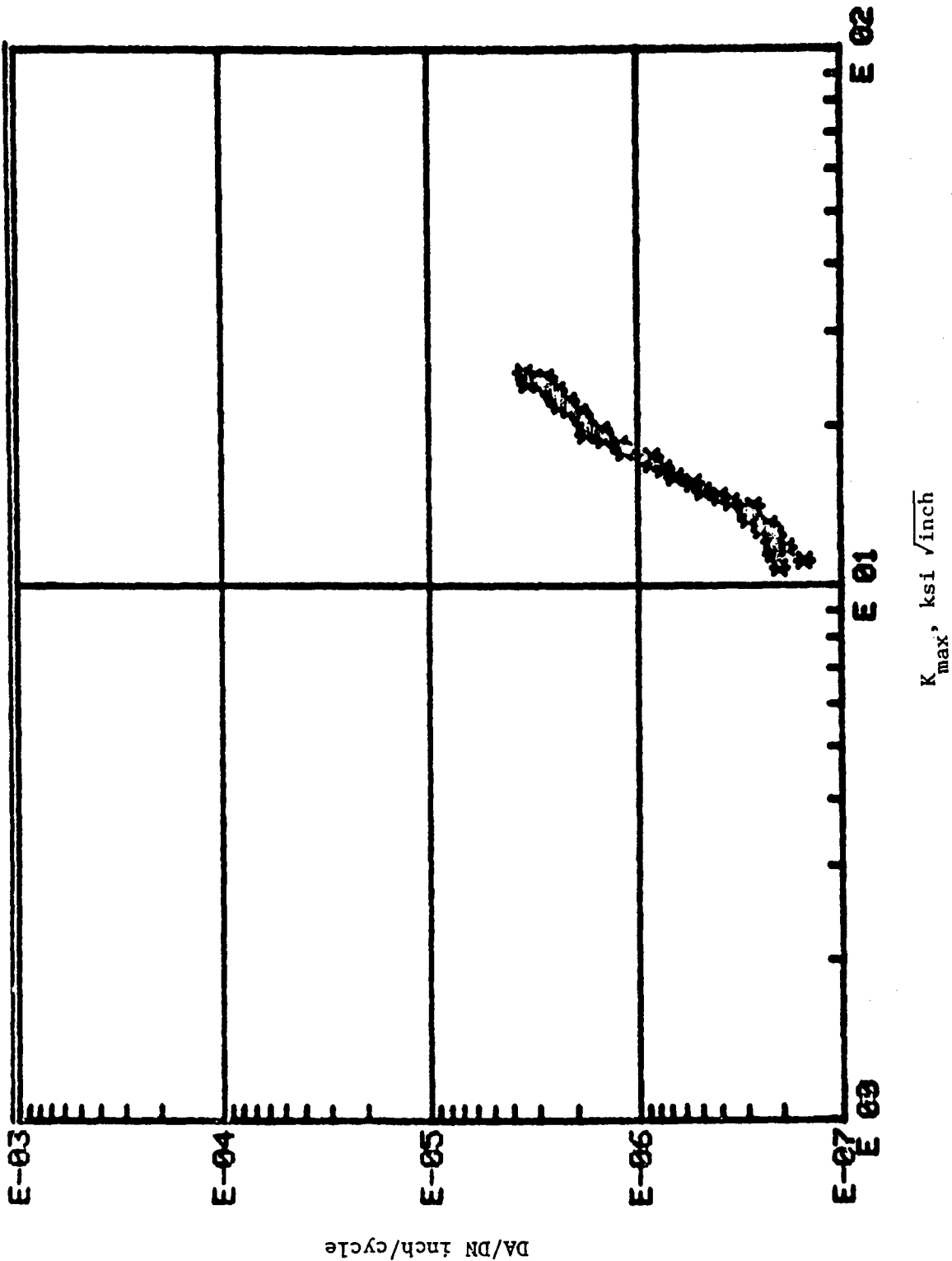
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CRACK GROWTH TEST OF 2024-T3 TEST CASE 52 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-19 FLAW TYPE - 1  
TEMP = 74 F REL HUM = 68 % 10-04-77  
B = .18 IN R(L) = .7 R(T) = .7  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	14.48	-14.48	0	7	7.4	180	0
2	14.48	-14.48	120810	7.5	7.9	180	0
3	14.48	-14.48	267340	8	8.3	180	0
4	14.48	-14.48	391430	8.5	8.9	180	0
5	14.48	-14.48	510270	9	9.3	180	0
6	14.48	-14.48	621600	9.5	9.8	180	0
7	14.48	-14.48	725760	10	10.2	180	0
8	14.48	-14.48	825560	10.5	10.7	180	0
9	14.48	-14.48	965620	11.1	11.4	180	0
10	14.48	-14.48	1.03442E+06	11.5	11.8	180	0
11	14.48	-14.48	1.11340E+06	12	12.2	180	0
12	14.48	-14.48	1.19722E+06	12.5	12.7	180	0
13	14.48	-14.48	1.27022E+06	13	13	180	0
14	14.48	-14.48	1.34742E+06	13.5	13.6	180	0
15	14.48	-14.48	1.40963E+06	14	14.1	180	0
16	14.48	-14.48	1.51311E+06	15	15.1	180	0
17	14.48	-14.48	1.60489E+06	16	16.1	180	0
18	14.48	-14.48	1.68061E+06	17	17.1	180	0
19	14.48	-14.48	1.74653E+06	18	18.1	180	0
20	14.48	-14.48	1.80448E+06	19	19.1	180	0
21	14.48	-14.48	1.86239E+06	20	20.1	180	0
22	14.48	-14.48	1.90588E+06	21	21.1	180	0
23	14.48	-14.48	1.94880E+06	22	22.2	180	0
24	14.48	-14.48	1.98557E+06	23	23.3	180	0
25	14.48	-14.48	2.01692E+06	24	24.5	180	0
26	14.48	-14.48	2.05034E+06	25	25.5	180	0
27	14.48	-14.48	2.10699E+06	27	27.5	180	0
28	14.48	-14.48	2.13393E+06	28	28.5	180	0
29	14.48	-14.48	2.16041E+06	29	29.5	180	0
30	14.48	-14.48	2.18535E+06	30	30.6	180	0
31	14.48	-14.48	2.20478E+06	31	31.4	180	0
32	14.48	-14.48	2.22923E+06	32	32.5	180	0
33	14.48	-14.48	2.24854E+06	33	33.4	180	0
34	14.48	-14.48	2.26860E+06	34	34.4	180	0
35	14.48	-14.48	2.28923E+06	35	35.4	180	0
36	14.48	-14.48	2.31003E+06	36	36.6	180	0
37	14.48	-14.48	2.32356E+06	37	37.4	180	0
38	14.48	-14.48	2.34279E+06	38	38.6	180	0
39	14.48	-14.48	2.36108E+06	39	39.6	180	0
40	14.48	-14.48	2.38931E+06	41	41.5	180	0



# TEST CASE 52

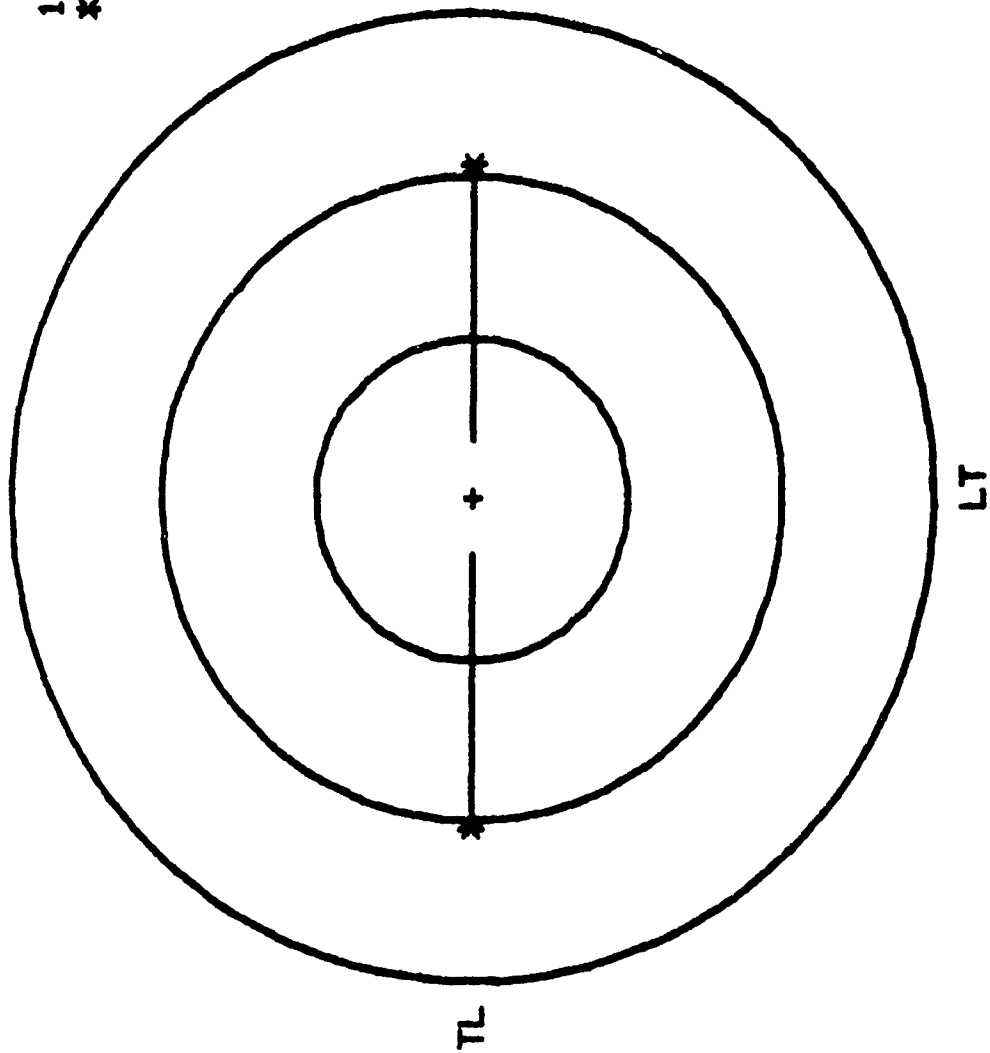
SPECIMEN 2-19



SPECIMEN 2-19

TEST CASE 52

1 IN SPACING  
\* TEST STOPPED



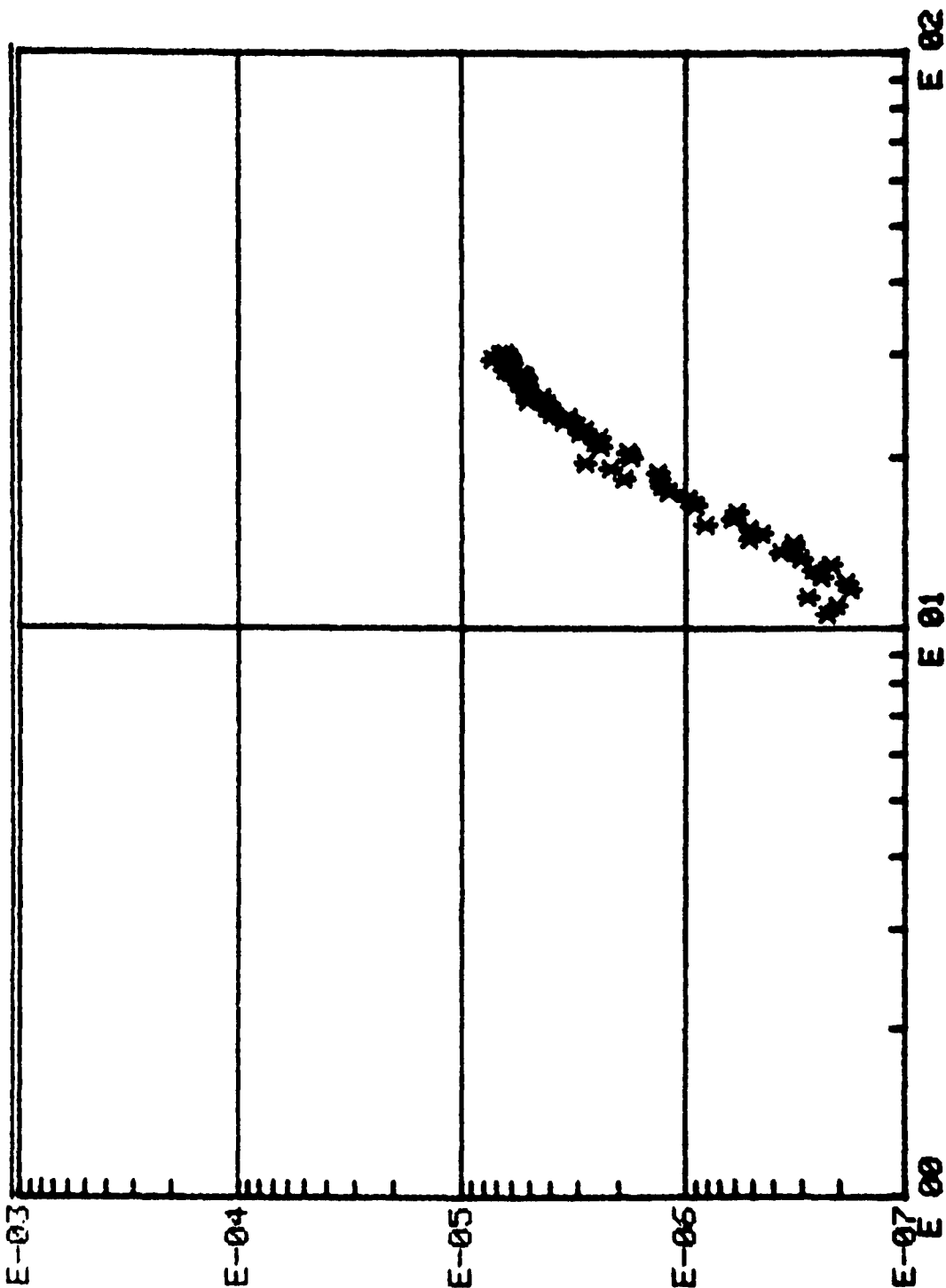
-----  
CRACK GROWTH TEST OF 2024-T3 TEST CASE 53 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-21 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 50 % 09/28/77  
B = .181 IN R(L) = .7 R(T) = .7  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	22.3	15.07	0	7	6.9	181	1
2	22.3	15.07	119430	7.5	7.5	181	1
3	22.3	15.07	239930	8	8	181	1
4	22.3	15.07	346250	8.5	8.7	181	1
5	22.3	15.07	483510	9	9.2	181	1
6	22.3	15.07	615480	9.5	9.7	181	1
7	22.3	15.07	717660	10	10.2	181	1
8	22.3	15.07	821200	10.5	10.8	181	1
9	22.3	15.07	923630	11	11.2	181	1
10	22.3	15.07	1.03125E+06	11.5	12	181	1
11	22.3	15.07	1.09794E+06	12	12.5	181	1
12	22.3	15.07	1.17341E+06	12.5	13	181	1
13	22.3	15.07	1.23389E+06	13	13.3	181	1
14	22.3	15.07	1.28655E+06	13.5	13.9	181	1
15	22.3	15.07	1.34691E+06	14	14.5	181	1
16	22.3	15.07	1.39483E+06	14.5	15	181	1
17	22.3	15.07	1.42540E+06	15	15.5	182	1
18	22.3	15.07	1.49445E+06	16	16.2	182	2
19	22.3	15.07	1.57474E+06	17	17.1	182	2
20	22.3	15.07	1.62995E+06	18	18.1	182	2
21	22.3	15.07	1.68091E+06	19	19.1	182	2
22	22.3	15.07	1.72272E+06	20	20.1	182	2
23	22.3	15.07	1.76349E+06	21	21.2	183	3
24	22.3	15.07	1.79146E+06	22	22.3	183	3
25	22.3	15.07	1.82714E+06	23	23.2	183	3
26	22.3	15.07	1.85147E+06	24	24.3	183	3
27	22.3	15.07	1.87009E+06	25	25.4	184	3
28	22.3	15.07	1.90007E+06	26	26.5	184	3
29	22.3	15.07	1.92788E+06	27	27.5	184	3
30	22.3	15.07	1.95096E+06	28	28.7	184	4
31	22.3	15.07	1.97166E+06	29	29.8	185	4
32	22.3	15.07	1.99333E+06	30	30.9	185	4
33	22.3	15.07	2.00939E+06	31	31.8	185	4
34	22.3	15.07	2.02714E+06	32	32.8	185	4
35	22.3	15.07	2.04503E+06	33	34	185	4
36	22.3	15.07	2.05922E+06	34	35	185	4
37	22.3	15.07	2.07424E+06	35	36	185	4
38	22.3	15.07	2.08689E+06	36	37	186	4
39	22.3	15.07	2.09945E+06	37	38	186	5
40	22.3	15.07	2.11204E+06	38	39.1	186	5
41	22.3	15.07	2.12453E+06	39.1	40.1	186	5
42	22.3	15.07	2.13334E+06	40	41	186	5
43	22.3	15.07	2.14417E+06	41	41.9	186	5
44	22.3	15.07	2.15399E+06	42	42.9	186	5
45	22.3	15.07	2.16454E+06	43.1	43.9	186	5
46	22.3	15.07	2.17305E+06	44	44.8	187	5
47	22.3	15.07	2.18235E+06	45	45.7	187	6
48	22.3	15.07	2.19127E+06	46	46.7	187	6
49	22.3	15.07	2.20130E+06	47	47.8	187	6
50	22.3	15.07	2.21100E+06	48	48.8	187	6

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	22.3	15.07	2.21978E+06	49	49.7	187	6
52	22.3	15.07	2.22880E+06	50.1	50.8	187	6
53	22.3	15.07	2.23583E+06	51	51.7	187	6
54	22.3	15.07	2.24392E+06	52	52.7	187	6
55	22.3	15.07	2.25237E+06	53	53.8	187	6
56	22.3	15.07	2.26036E+06	54	54.7	187	6
57	22.3	15.07	2.26687E+06	55	55.6	187	6
58	22.3	15.07	2.27501E+06	56	56.6	187	6
59	22.3	15.07	2.28260E+06	57	57.7	188	6
60	22.3	15.07	2.29052E+06	58	58.7	188	6

# SPECIMEN 2-21 TEST CASE 53

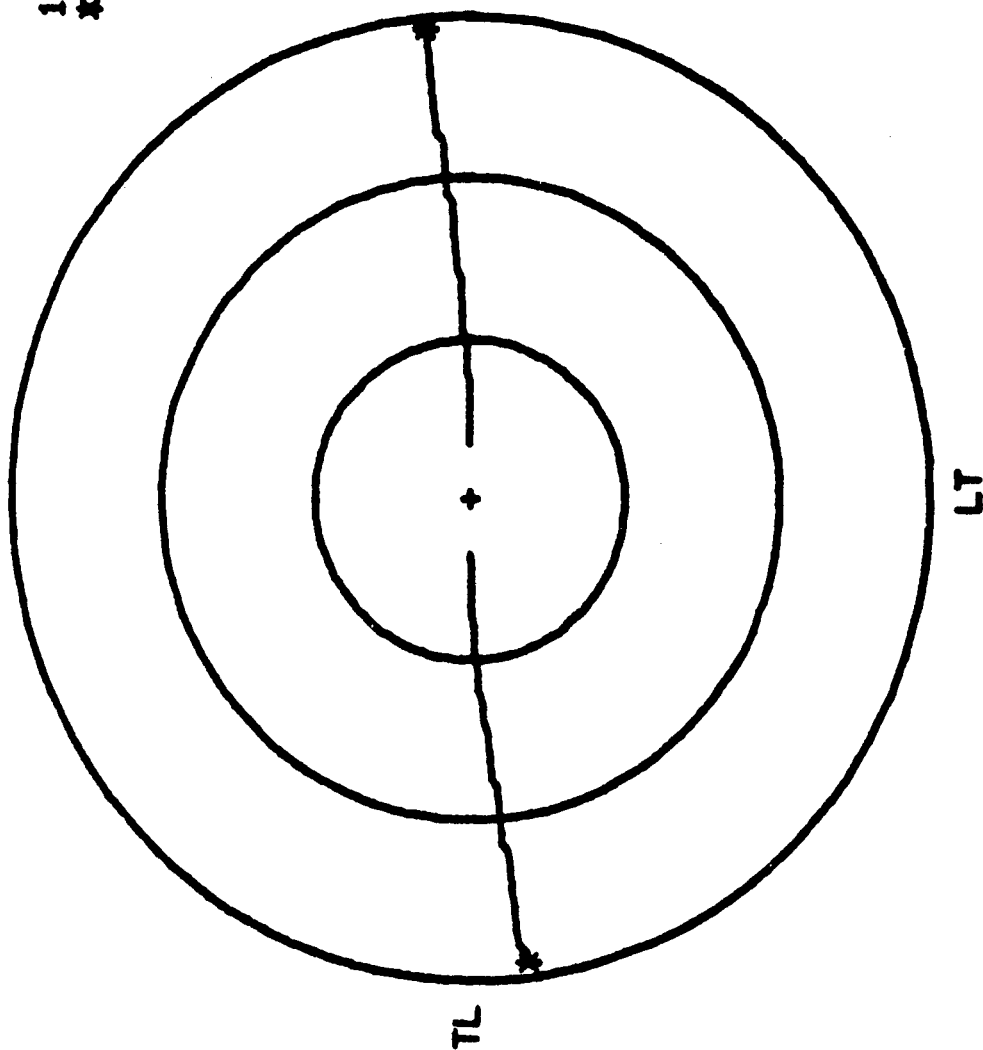
E-03 E-04 E-05 E-06 E-07



SPECIMEN 2-21

TEST CASE 53

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 54 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-3 FLAW TYPE - 1

TEMP = 73 F REL HUM = 46 % 09/21/77

B = .174 IN R(L) = .7 R(T) = .7

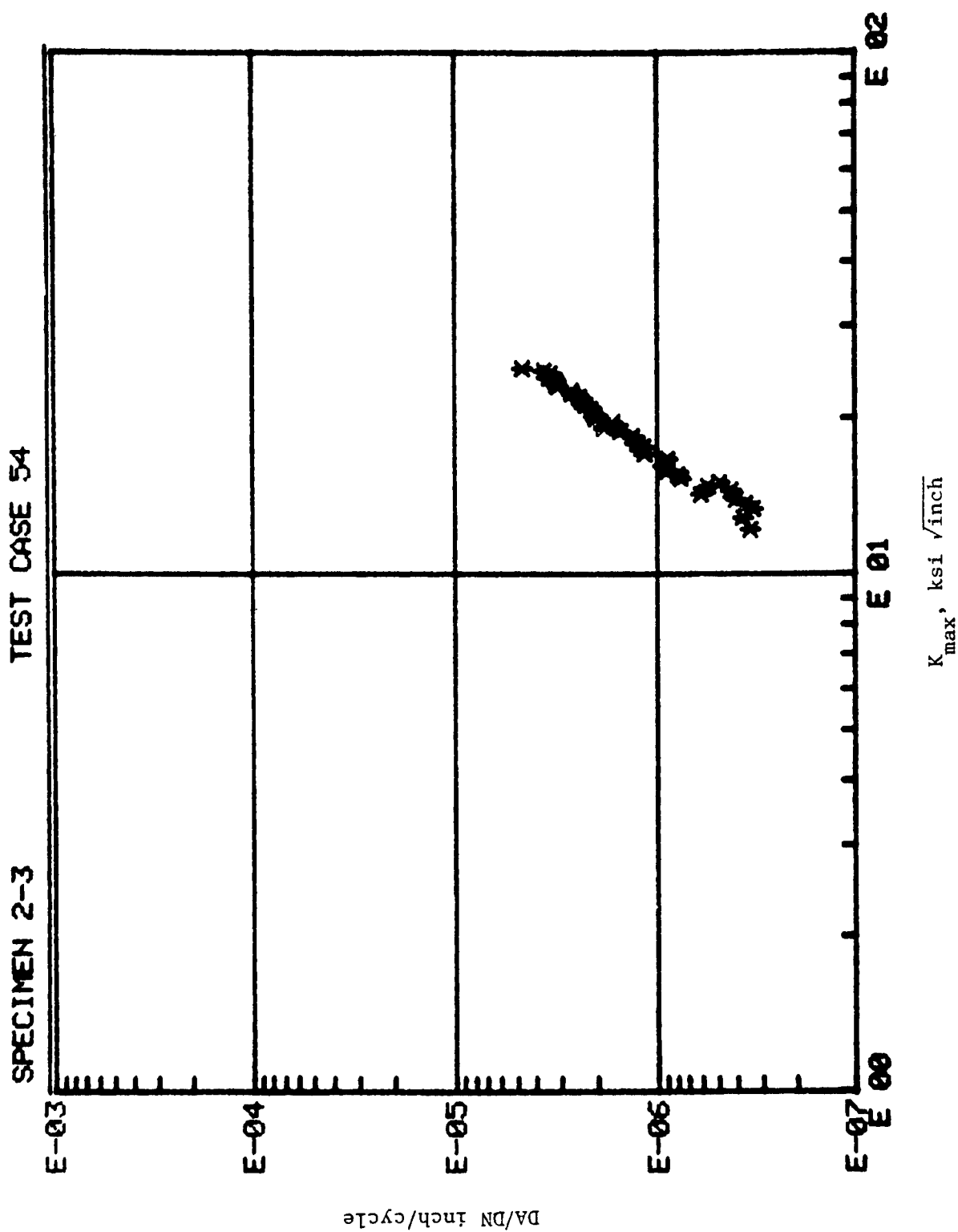
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = - 5

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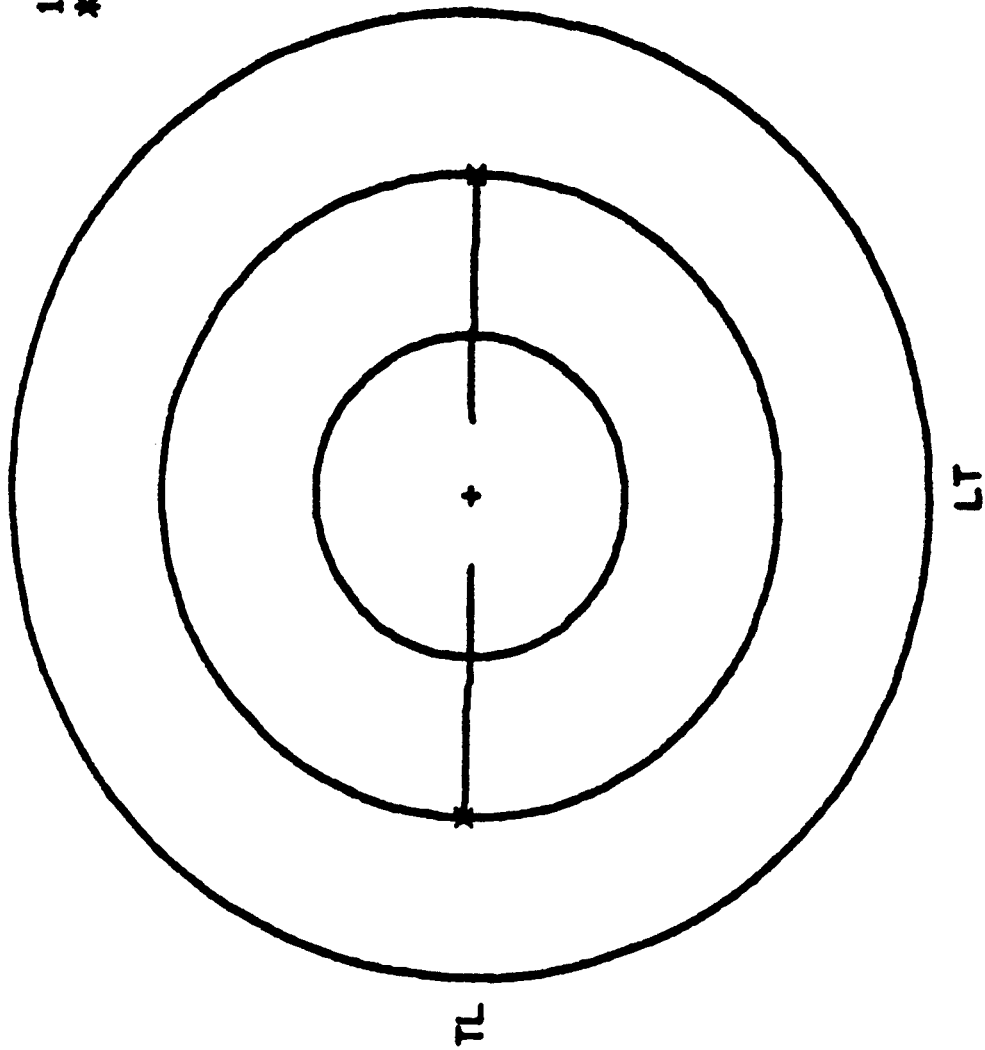
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.11	-4.57	0	9	9.4	180	-1
2	17.11	-4.57	122860	10	10.1	180	0
3	17.11	-4.57	282920	11	11.5	180	0
4	17.11	-4.57	358870	11.5	12	180	0
5	17.11	-4.57	433320	12	12.6	180	0
6	17.11	-4.57	494560	12.5	13.1	180	0
7	17.11	-4.57	539610	13	13.7	180	0
8	17.11	-4.57	591610	13.5	14.1	180	0
9	17.11	-4.57	636320	14	14.6	180	0
10	17.11	-4.57	682190	14.5	15	180	0
11	17.11	-4.57	718160	15	15.6	180	0
12	17.11	-4.57	749500	15.5	16.1	180	0
13	17.11	-4.57	777280	16	16.6	180	0
14	17.11	-4.57	835790	17.1	17.7	180	0
15	17.11	-4.57	886090	18	18.6	180	0
16	17.11	-4.57	927070	19	19.5	180	0
17	17.11	-4.57	963220	20	20.2	180	0
18	17.11	-4.57	1.00303E+06	21	21.2	180	-1
19	17.11	-4.57	1.04026E+06	22	22.2	180	-1
20	17.11	-4.57	1.07492E+06	23	23.3	180	-1
21	17.11	-4.57	1.10222E+06	24	24.3	179	-1
22	17.11	-4.57	1.12784E+06	25	25	179	-1
23	17.11	-4.57	1.15275E+06	26	26	179	-1
24	17.11	-4.57	1.17828E+06	27	27.1	179	-1
25	17.11	-4.57	1.20615E+06	28.2	28.3	179	-1
26	17.11	-4.57	1.22726E+06	29.1	29.3	179	-1
27	17.11	-4.57	1.24629E+06	30	30.2	179	-1
28	17.11	-4.57	1.27320E+06	31.3	31.5	179	-1
29	17.11	-4.57	1.28548E+06	32	32.1	179	-1
30	17.11	-4.57	1.30439E+06	33	33.1	179	-1
31	17.11	-4.57	1.31967E+06	34	34	179	-1
32	17.11	-4.57	1.33550E+06	35	35	179	-1
33	17.11	-4.57	1.35106E+06	36	36	179	-1
34	17.11	-4.57	1.36562E+06	37	37	179	-1
35	17.11	-4.57	1.38050E+06	38	38	179	-1
36	17.11	-4.57	1.39504E+06	39	39.1	179	-1
37	17.11	-4.57	1.40527E+06	40	40	179	-1



SPECIMEN 2-3

TEST CASE 54

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 12 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-33 FLAW TYPE - 7  
TEMP = 74 F REL HUM = 55 % 01-18-78  
B = .178 IN R(L) = .7 R(T) = .7  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = 0

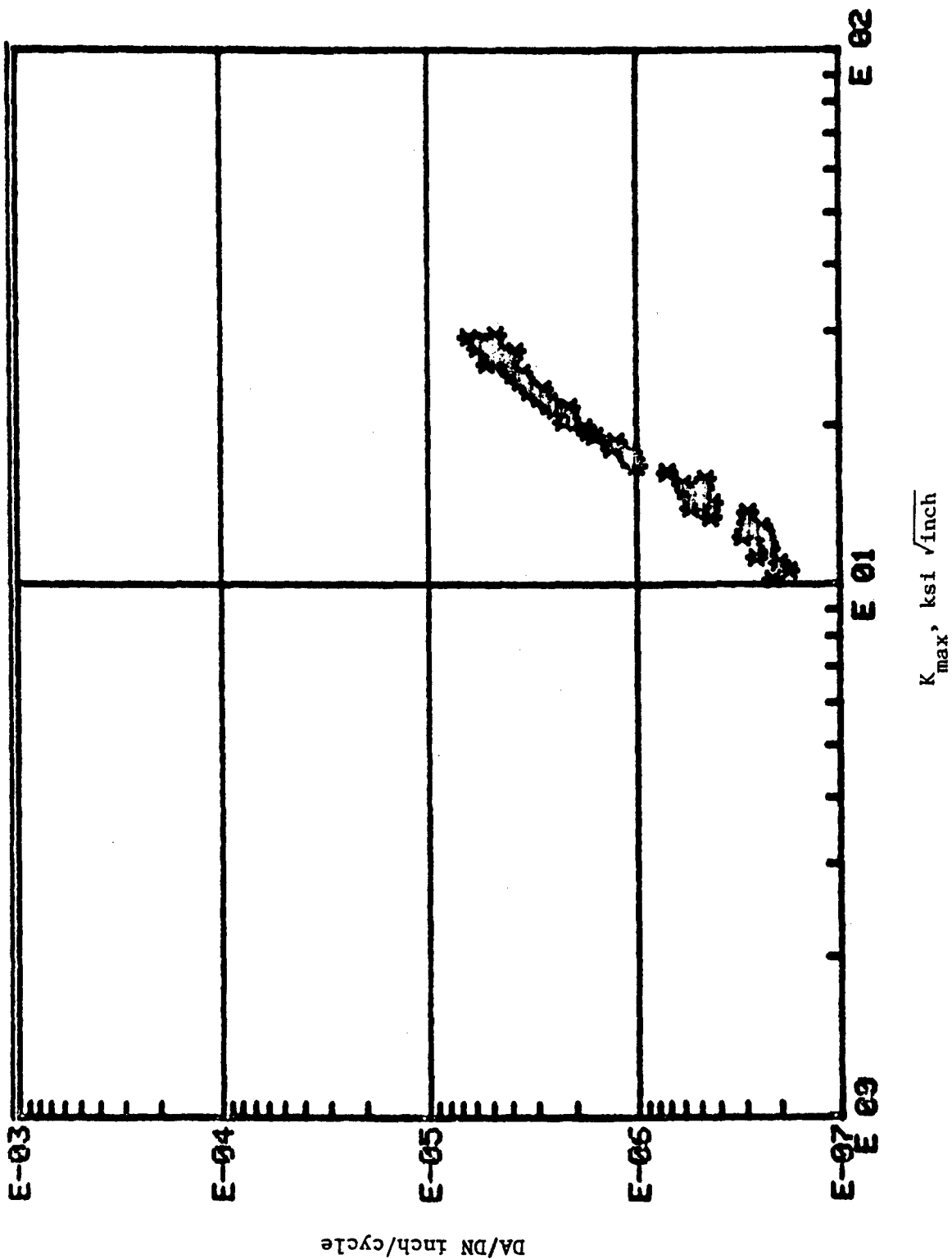
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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	19.71	5.25	0	6.3	6.5	180	1
2	19.71	5.25	138230	7	7	180	2
3	19.71	5.25	261960	7.5	7.4	180	1
4	19.71	5.25	384550	8	7.9	180	1
5	19.71	5.25	480230	8.5	8.4	180	0
6	19.71	5.25	590230	9	8.9	180	0
7	19.71	5.25	688480	9.5	9.3	180	0
8	19.71	5.25	777850	10	9.9	180	0
9	19.71	5.25	871360	10.5	10.3	180	0
10	19.71	5.25	952040	11	10.6	180	0
11	19.71	5.25	1.02999E+06	11.5	11	180	0
12	19.71	5.25	1.09315E+06	12	11.6	180	0
13	19.71	5.25	1.17044E+06	12.5	12	180	0
14	19.71	5.25	1.22035E+06	13	12.6	180	0
15	19.71	5.25	1.27275E+06	13.5	13	180	0
16	19.71	5.25	1.32320E+06	14	13.5	180	0
17	19.71	5.25	1.36665E+06	14.5	13.9	180	0
18	19.71	5.25	1.40946E+06	15	14.4	180	0
19	19.71	5.25	1.44071E+06	15.2	14.8	180	0
20	19.71	5.25	1.50289E+06	16	15.5	180	0
21	19.71	5.25	1.59505E+06	17	16.2	180	0
22	19.71	5.25	1.66503E+06	18	17.2	179	-1
23	19.71	5.25	1.71480E+06	19	18.2	179	-1
24	19.71	5.25	1.75879E+06	20	19.1	179	-1
25	19.71	5.25	1.77928E+06	20.4	19.6	179	-1
26	19.71	5.25	1.80755E+06	21	20.2	179	-1
27	19.71	5.25	1.84384E+06	22	21.1	179	-1
28	19.71	5.25	1.89109E+06	23.1	22.4	179	-1
29	19.71	5.25	1.91479E+06	24	23	179	-1
30	19.71	5.25	1.94836E+06	25	24.3	179	-1
31	19.71	5.25	1.97782E+06	26	25.4	179	-1
32	19.71	5.25	2.00255E+06	27	26.6	179	-1
33	19.71	5.25	2.02778E+06	28	27.7	179	-1
34	19.71	5.25	2.04978E+06	29	28.6	179	-1
35	19.71	5.25	2.07147E+06	30	29.7	179	-1
36	19.71	5.25	2.07504E+06	30.1	29.9	179	-1
37	19.71	5.25	2.09130E+06	31	30.7	179	-1
38	19.71	5.25	2.11037E+06	32	31.7	179	-1
39	19.71	5.25	2.12597E+06	33	32.5	179	-1
40	19.71	5.25	2.14515E+06	34	33.7	179	-1
41	19.71	5.25	2.16128E+06	35	34.8	179	-1
42	19.71	5.25	2.17730E+06	36	35.6	179	-1
43	19.71	5.25	2.19374E+06	37	36.8	179	-1
44	19.71	5.25	2.20990E+06	38.1	38	179	-1
45	19.71	5.25	2.22128E+06	39	38.7	179	-1
46	19.71	5.25	2.23419E+06	40	39.7	179	-1
47	19.71	5.25	2.24762E+06	41	40.6	179	-1
48	19.71	5.25	2.26193E+06	42	41.9	179	-1
49	19.71	5.25	2.27402E+06	43	42.9	179	-1
50	19.71	5.25	2.28373E+06	44	43.9	179	0

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	19.71	5.25	2.29597E+06	45	44.9	179	0
52	19.71	5.25	2.30697E+06	46	45.9	179	-1
53	19.71	5.25	2.31828E+06	47	46.9	179	-1
54	19.71	5.25	2.32809E+06	48	47.8	179	-1
55	19.71	5.25	2.34125E+06	49	48.8	179	-1
56	19.71	5.25	2.35087E+06	50	50	179	-1
57	19.71	5.25	2.36132E+06	51	51	179	-1
58	19.71	5.25	2.37029E+06	52	51.9	179	-1
59	19.71	5.25	2.37874E+06	53	52.8	179	-1
60	19.71	5.25	2.38927E+06	54	54	179	-1
61	19.71	5.25	2.39713E+06	55	55	179	-1
62	19.71	5.25	2.40834E+06	56	56.1	179	-1

# TEST CASE 12

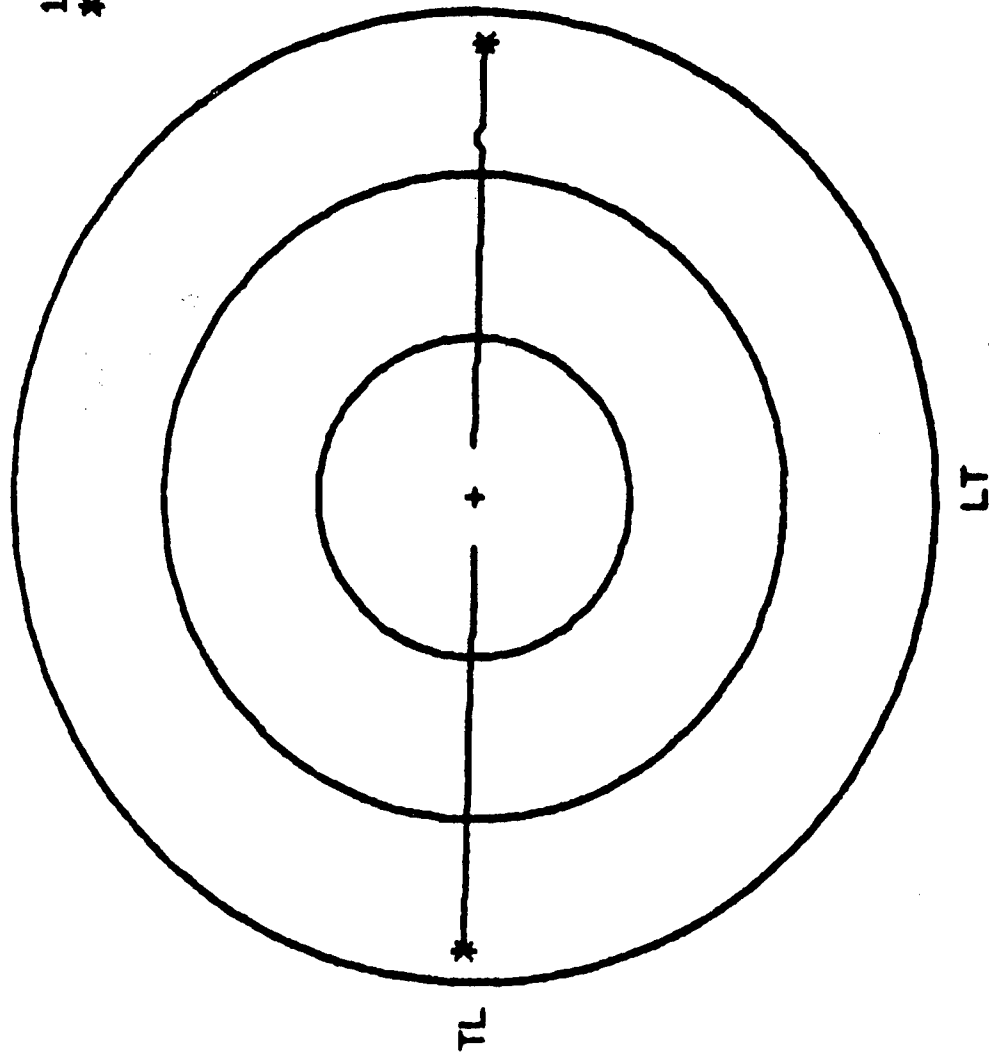
SPECIMEN 2-33



SPECIMEN 2-33

TEST CASE 12

1 IN SPACING  
\* TEST STOPPED





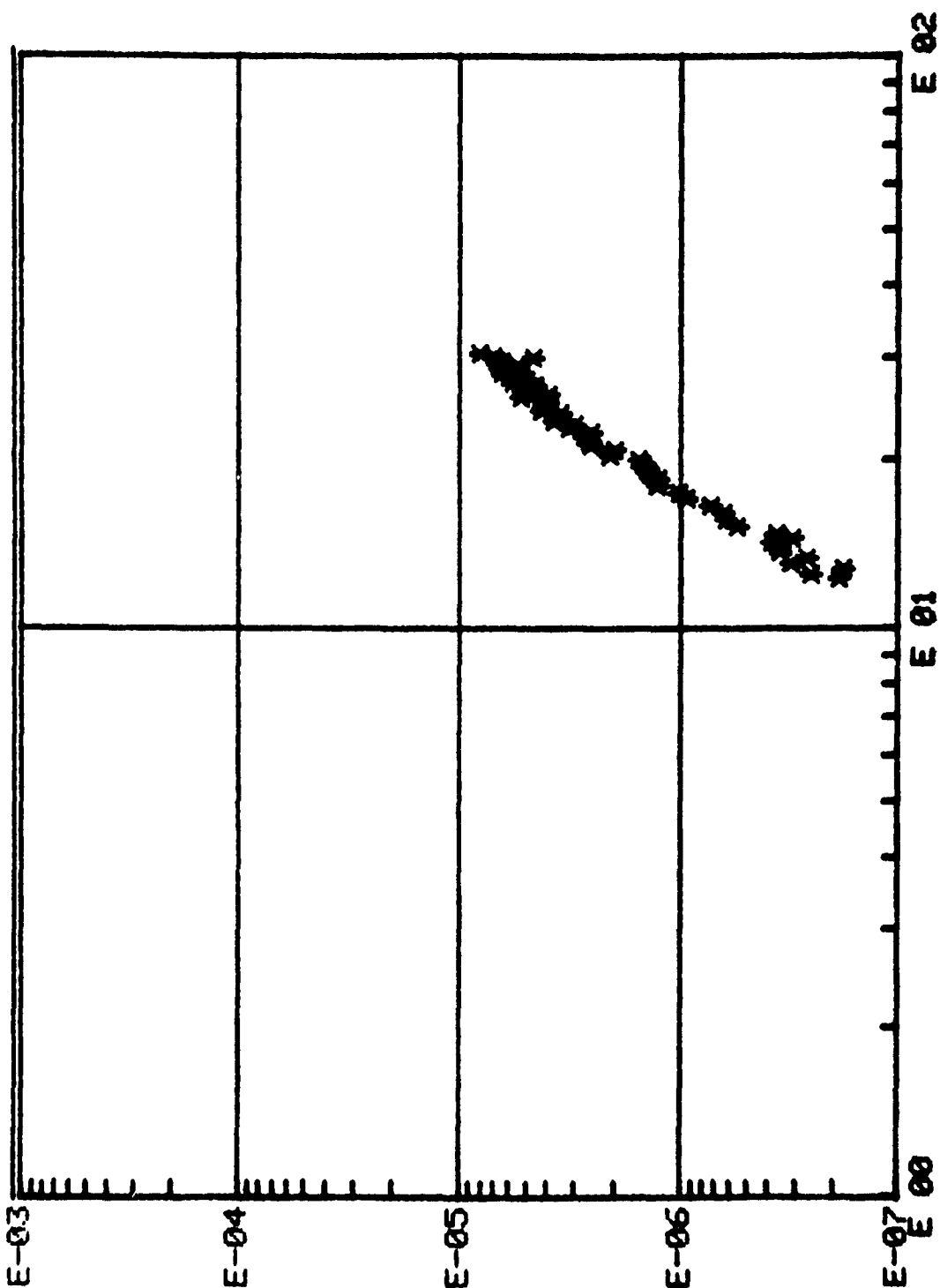
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CRACK GROWTH TEST OF 2024-T3 TEST CASE 16 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-46 FLAW TYPE - 2  
TEMP = 75 F REL HUM = 50 % 08/26/77  
B = .181 IN R(L) = .7 R(T) = .7  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .03 IN  
BIAXIAL RATIO = 0  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	5.25	19.7	0	10	8.9	270	90
2	5.25	19.7	106030	10.5	9.2	269	89
3	5.25	19.7	194190	11	9.6	269	88
4	5.25	19.7	318810	11.5	10	269	88
5	5.25	19.7	406520	12	10.6	269	88
6	5.25	19.7	500240	12.5	11.1	269	88
7	5.25	19.7	585600	13	11.8	270	88
8	5.25	19.7	641660	13.5	12.1	269	88
9	5.25	19.7	706880	14	12.6	269	88
10	5.25	19.7	779380	14.5	13	268	88
11	5.25	19.7	854090	15	13.6	268	88
12	5.25	19.7	938540	16	14.5	268	88
13	5.25	19.7	1.01412E+06	17	15.4	268	87
14	5.25	19.7	1.07959E+06	18	16.1	268	87
15	5.25	19.7	1.15437E+06	19	17.3	268	88
16	5.25	19.7	1.20723E+06	20	18.3	268	88
17	5.25	19.7	1.25655E+06	21	19.3	268	88
18	5.25	19.7	1.29568E+06	22	20.3	268	88
19	5.25	19.7	1.35109E+06	23.5	21.6	268	88
20	5.25	19.7	1.36934E+06	24	22.1	268	88
21	5.25	19.7	1.40313E+06	25	23	268	88
22	5.25	19.7	1.43883E+06	26	24.1	268	88
23	5.25	19.7	1.46977E+06	27	25	268	88
24	5.25	19.7	1.49379E+06	28	26	268	88
25	5.25	19.7	1.51902E+06	29	27	268	88
26	5.25	19.7	1.54075E+06	30	28.2	268	88
27	5.25	19.7	1.56017E+06	31	29.2	268	88
28	5.25	19.7	1.58133E+06	32	30.5	268	88
29	5.25	19.7	1.60005E+06	33	31.4	268	88
30	5.25	19.7	1.61421E+06	34	32.2	268	88
31	5.25	19.7	1.63159E+06	35	33.3	268	88
32	5.25	19.7	1.64490E+06	36	34.3	268	88
33	5.25	19.7	1.65951E+06	37	35.4	268	88
34	5.25	19.7	1.67310E+06	38	36.3	268	88
35	5.25	19.7	1.68605E+06	39	37.5	268	88
36	5.25	19.7	1.69822E+06	40	38.5	268	88
37	5.25	19.7	1.71316E+06	41.1	39.8	268	88
38	5.25	19.7	1.72383E+06	42	40.6	268	88
39	5.25	19.7	1.73434E+06	43	41.8	268	88
40	5.25	19.7	1.74576E+06	44	42.6	268	88
41	5.25	19.7	1.75587E+06	45	43.7	268	88
42	5.25	19.7	1.76595E+06	46	44.6	268	88
43	5.25	19.7	1.77797E+06	47	45.8	268	88
44	5.25	19.7	1.78675E+06	48	46.8	268	88
45	5.25	19.7	1.79782E+06	49.1	47.9	268	88
46	5.25	19.7	1.80495E+06	50	48.7	268	88
47	5.25	19.7	1.81401E+06	51	49.7	268	88
48	5.25	19.7	1.82214E+06	52	50.8	268	88
49	5.25	19.7	1.83087E+06	53	51.7	268	88
50	5.25	19.7	1.83919E+06	54	52.9	268	88

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	5.25	19.7	1.84832E+06	55	53.9	268	88
52	5.25	19.7	1.85630E+06	56	55	268	88
53	5.25	19.7	1.96387E+06	57	56	268	88
54	5.25	19.7	1.97465E+06	58	57	268	88
55	5.25	19.7	1.88184E+06	59	58	268	88
56	5.25	19.7	1.88772E+06	60	58.9	268	88

# SPECIMEN 2-46 TEST CASE 16

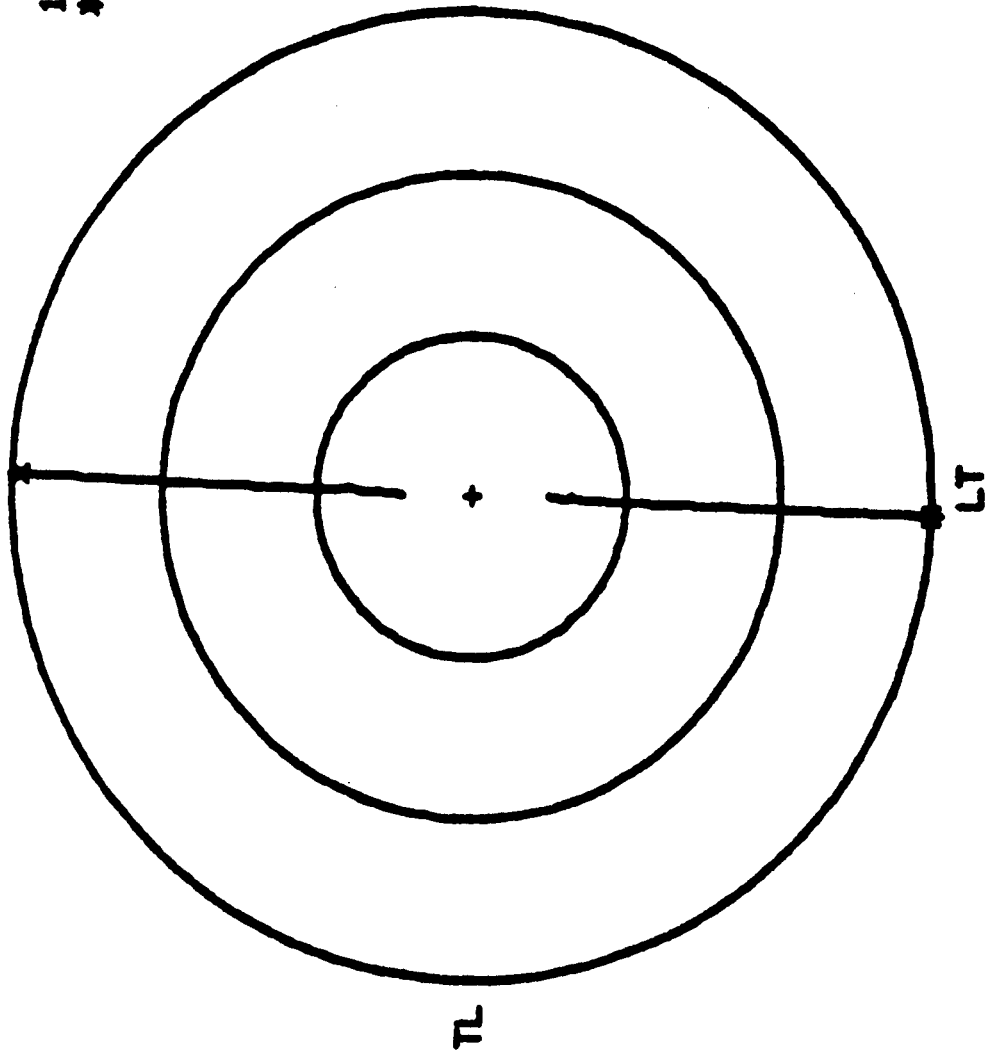
E-03 E-04 E-05 E-06 E-07



SPECIMEN 2-46

TEST CASE 16

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 86 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-98 FLAW TYPE - 4  
TEMP = 71 F REL HUM = 45 % 09/20/77  
B = .18 IN R(L) = .1 R(R) = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = 0  
-----

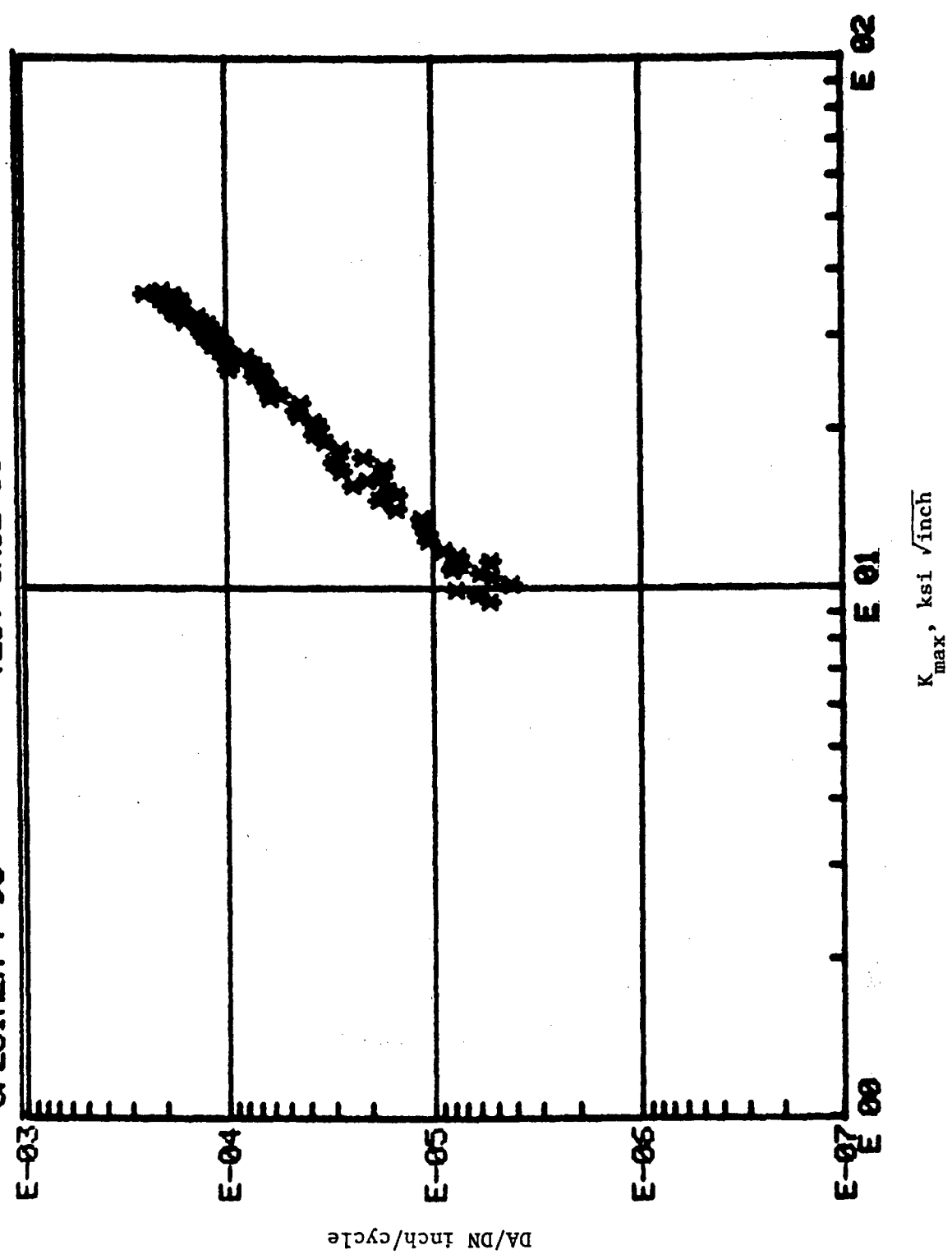
REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	23.65	6.3	0	3.9	3	180	0
2	23.65	6.3	2350	4.2	3.2	181	0
3	23.65	6.3	4000	4.4	3.4	181	0
4	23.65	6.3	5300	4.6	3.6	181	0
5	23.65	6.3	7700	4.8	3.9	181	0
6	23.65	6.3	9600	5	4	182	0
7	23.65	6.3	11300	5.2	4.2	181	0
8	23.65	6.3	12850	5.4	4.5	181	0
9	23.65	6.3	14100	5.6	4.7	181	0
10	23.65	6.3	15450	5.8	4.9	181	0
11	23.65	6.3	16850	6	5	181	0
12	23.65	6.3	20150	6.5	5.5	180	-1
13	23.65	6.3	22950	7	6	180	-1
14	23.65	6.3	25310	7.5	6.5	180	-2
15	23.65	6.3	27640	8	7	180	-2
16	23.65	6.3	30090	8.5	7.5	180	-2
17	23.65	6.3	32080	9	8	180	-2
18	23.65	6.3	35370	10	9	180	-2
19	23.65	6.3	37010	10.5	9.7	180	-3
20	23.65	6.3	38350	11	10	180	-3
21	23.65	6.3	40180	11.5	10.7	180	-3
22	23.65	6.3	41000	12	11	180	-3
23	23.65	6.3	42450	12.5	11.7	180	-3
24	23.65	6.3	43730	13	12.1	181	-4
25	23.65	6.3	44910	13.5	12.9	181	-4
26	23.65	6.3	45780	14	13	181	-4
27	23.65	6.3	46860	14.5	13.8	181	-4
28	23.65	6.3	47780	15	14.1	181	-4
29	23.65	6.3	50210	16.3	15.5	181	-4
30	23.65	6.3	51110	17	16	181	-4
31	23.65	6.3	52520	18	17.1	181	-4
32	23.65	6.3	53930	19	18.1	181	-4
33	23.65	6.3	55260	20	19.1	181	-4
34	23.65	6.3	56480	21	20.1	181	-4
35	23.65	6.3	57730	22	21.5	181	-4
36	23.65	6.3	58930	23.1	22.5	181	-4
37	23.65	6.3	59630	24	23.3	181	-4
38	23.65	6.3	60730	25.1	24.6	181	-4
39	23.65	6.3	61470	26	25.5	181	-3
40	23.65	6.3	62370	27	26.8	181	-3
41	23.65	6.3	63180	28.1	27.8	181	-3
42	23.65	6.3	63840	29	28.8	181	-3
43	23.65	6.3	64370	30	29.2	181	-4
44	23.65	6.3	64860	31	30.1	181	-4
45	23.65	6.3	65550	32	31.1	181	-4
46	23.65	6.3	66090	33	32.2	181	-4
47	23.65	6.3	66810	34	33.5	181	-4
48	23.65	6.3	67260	35	34.3	181	-4
49	23.65	6.3	67760	36	35.4	181	-4
50	23.65	6.3	68210	37	36.2	181	-4

REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	23.65	6.3	68690	38	37.4	181	-4
52	23.65	6.3	69250	39.1	38.9	181	-4
53	23.65	6.3	69580	40	39.4	181	-4
54	23.65	6.3	70050	41	40.8	180	-4
55	23.65	6.3	70480	42	41.9	180	-4
56	23.65	6.3	70930	43	43	180	-3
57	23.65	6.3	71300	44	44	180	-3
58	23.65	6.3	71710	45	45	180	-3
59	23.65	6.3	72030	46	46	180	-3
60	23.65	6.3	72390	47	47.2	180	-3
61	23.65	6.3	72740	48	48.1	180	-3
62	23.65	6.3	73070	49	49.4	180	-3
63	23.65	6.3	73420	50	50.9	180	-3
64	23.65	6.3	73700	51	51.9	180	-3
65	23.65	6.3	73990	52	52.9	180	-3
66	23.65	6.3	74260	53	54	180	-3
67	23.65	6.3	74580	54.1	55	180	-3
68	23.65	6.3	74810	55	56	181	-3
69	23.65	6.3	75090	56	57	181	-3
70	23.65	6.3	75370	57	58	181	-3
71	23.65	6.3	75570	58	59	180	-3
72	23.65	6.3	75790	59	59.8	180	-3



SPECIMEN 7-98

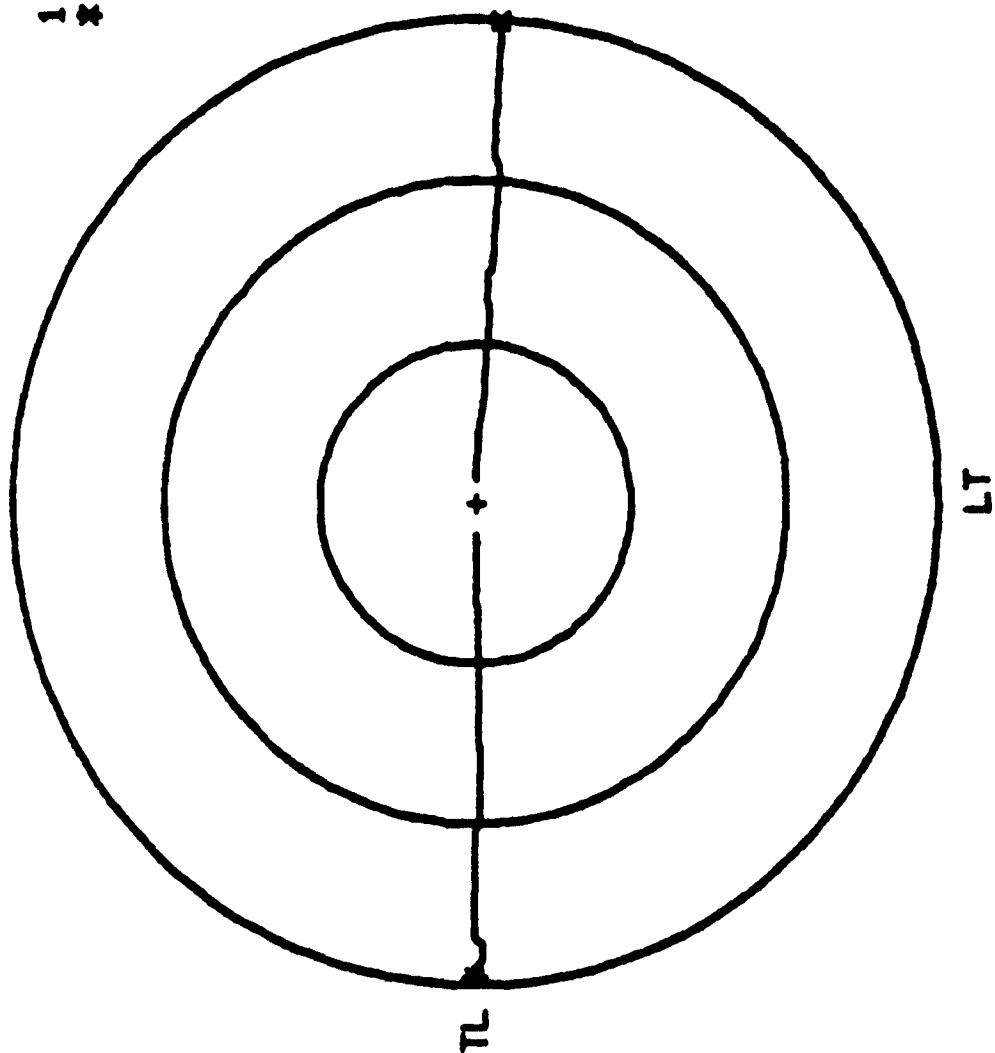
TEST CASE 86



SPECIMEN 7-98

TEST CASE 86

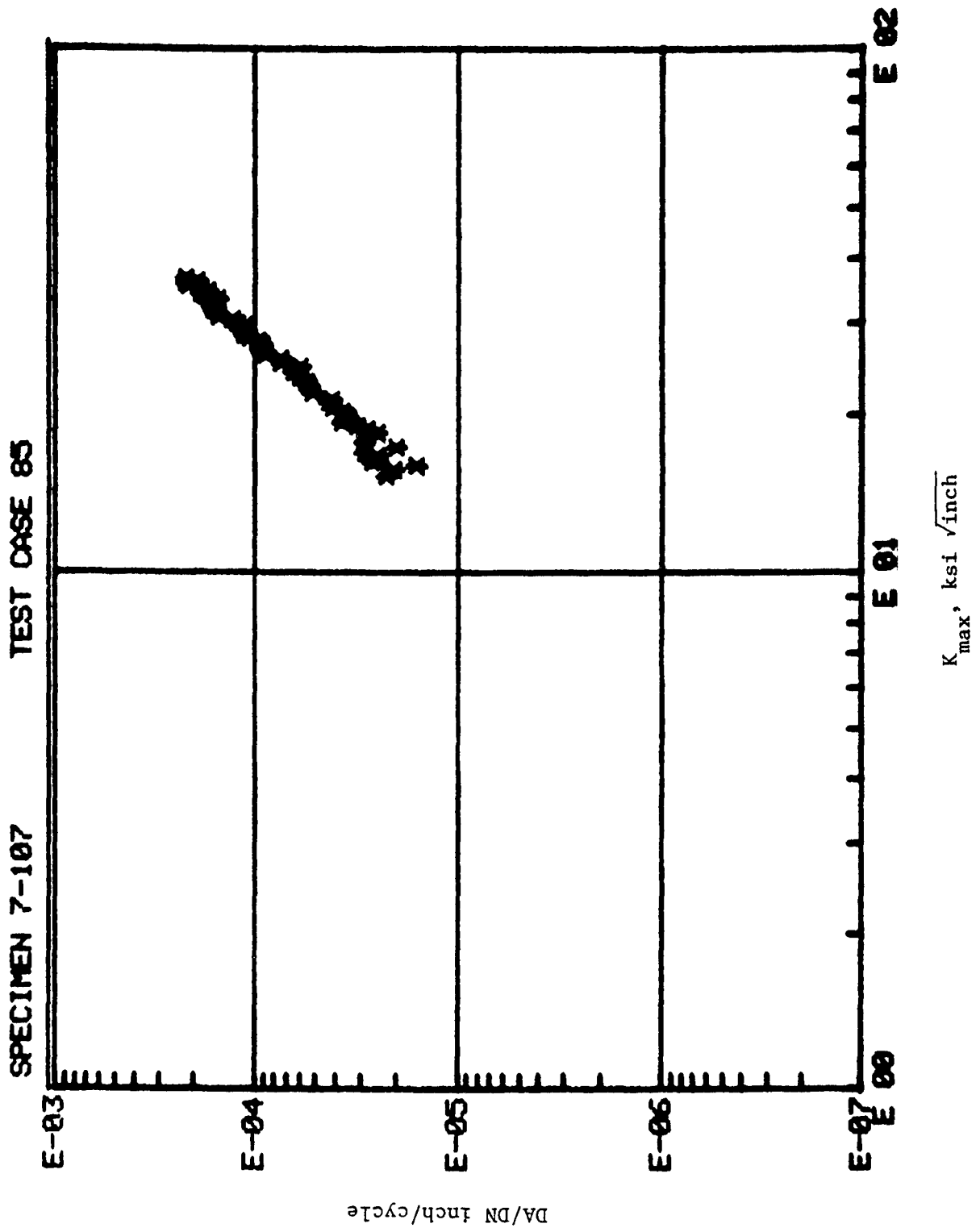
1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 85 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-107 FLAW TYPE = S  
TEMP = 75 F REL HUM = 49 % 09/28/77  
B = .172 IN RCL = .1 RCT = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = 0  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	23.65	6.3	0	8.8	9.6	180	0
2	23.65	6.3	550	9	9.9	180	0
3	23.65	6.3	1150	9.2	10.2	180	0
4	23.65	6.3	1620	9.4	10.3	180	0
5	23.65	6.3	2000	9.6	10.5	180	0
6	23.65	6.3	2400	9.8	10.7	180	0
7	23.65	6.3	2800	10	10.9	180	0
8	23.65	6.3	3500	10.4	11.3	179	0
9	23.65	6.3	4750	10.9	11.8	179	0
10	23.65	6.3	5700	11.5	12.3	179	0
11	23.65	6.3	6600	12	12.8	179	0
12	23.65	6.3	7500	12.5	13.2	178	0
13	23.65	6.3	8300	13	13.6	178	0
14	23.65	6.3	9020	13.5	14	178	0
15	23.65	6.3	9690	14	14.5	178	0
16	23.65	6.3	10480	14.5	15.1	178	0
17	23.65	6.3	11180	15	15.6	178	0
18	23.65	6.3	12530	16	16.6	178	0
19	23.65	6.3	13750	17	17.6	177	0
20	23.65	6.3	14970	18	18.7	177	0
21	23.65	6.3	16050	19	19.5	177	1
22	23.65	6.3	17070	20	20.6	177	1
23	23.65	6.3	17950	21	21.5	177	1
24	23.65	6.3	18800	22	22.4	177	0
25	23.65	6.3	19640	23	23.4	177	0
26	23.65	6.3	20460	24	24.5	177	0
27	23.65	6.3	21380	25	25.7	177	0
28	23.65	6.3	22060	26	26.7	178	0
29	23.65	6.3	22770	27	27.8	178	0
30	23.65	6.3	23360	28	28.9	178	0
31	23.65	6.3	23870	29	29.8	178	0
32	23.65	6.3	24430	30	30.9	178	0
33	23.65	6.3	25000	31	32	178	0
34	23.65	6.3	25550	32	33.1	178	0
35	23.65	6.3	26000	33	34	178	0
36	23.65	6.3	26450	34	35	178	0
37	23.65	6.3	26870	35	35.9	178	0
38	23.65	6.3	27300	36	36.8	178	0
39	23.65	6.3	27700	37	37.6	178	1
40	23.65	6.3	28070	38	38.4	178	1
41	23.65	6.3	28480	39	39.5	178	1
42	23.65	6.3	28810	40	40.5	178	1
43	23.65	6.3	29160	41	41.6	178	1
44	23.65	6.3	29490	42	42.7	178	1
45	23.65	6.3	29800	43	43.7	178	1
46	23.65	6.3	30110	44	44.7	178	1
47	23.65	6.3	30400	45	45.6	178	1
48	23.65	6.3	30730	46	46.6	178	1
49	23.65	6.3	31000	47	47.5	178	1
50	23.65	6.3	31270	48	48.5	178	1

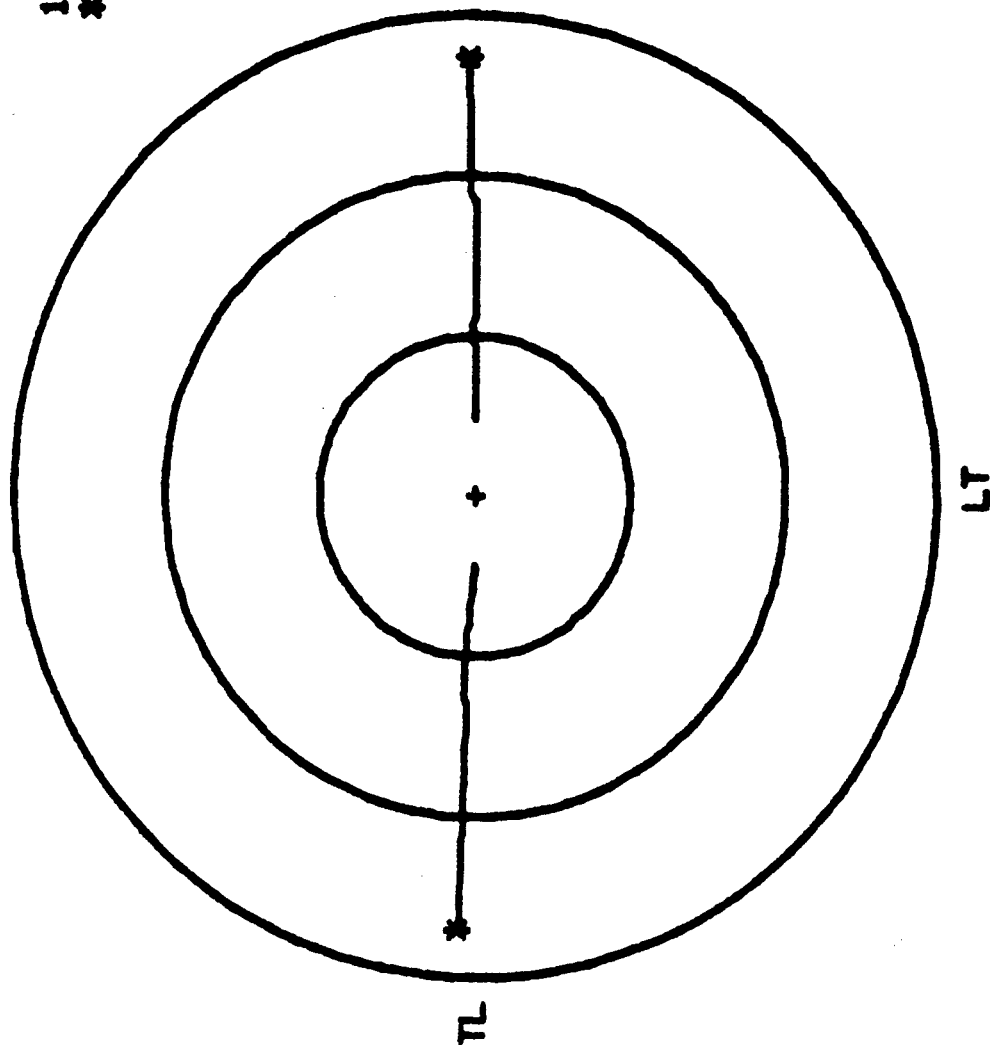
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	23.65	6.3	31520	49	49.2	178	1
52	23.65	6.3	31790	50	50.2	178	1
53	23.65	6.3	32050	51	51.4	178	1
54	23.65	6.3	32300	52	52.6	178	1
55	23.65	6.3	32560	53	53.6	178	1
56	23.65	6.3	32800	54	54.7	178	1



SPECIMEN 7-107

TEST CASE 85

1 IN SPACING  
\* TEST STOPPED



TEST CASE 17

CRACK GROWTH TEST OF 7075-T7 SPEC LT-7-5

CCT SPECIMEN TYPE

TEMP = 75 F REL HUM = 53 % 5/17/77

W = 7.013 IN B = .18 IN R = .1

FREQUENCY = 10 HZ LAB AIR ENVIRONMENT

GRID SPACING = .05 IN FILE CODE DK17SL75

TESTING WAS STARTED AT 12 KSI (P-MAX = 15.1 KIPS).  
AFTER 380000 CYCLES WITH NO CRACK INITIATION THE  
TEST WAS RESTARTED AT 18 KSI



REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	22.7	0	8.3	7.7	8.1	7.8
2	22.7	69410	8.8	8.2	8.1	7.8
3	22.7	74350	9.4	9	8.1	7.8
4	22.7	76180	10.2	10	8.1	7.8
5	22.7	77280	11	11	8.1	10
6	22.7	77980	11.7	12	10.4	11.9
7	22.7	78540	12.5	13	12.1	13.2
8	22.7	78980	13.6	14	13.5	14.5

CRACK GROWTH TEST OF 7075-T7 TEST CASE 19 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-74 FLAW TYPE - 6

TEMP = 74 F

REL HUM = 54 %

5-24-78

B = .178 IN

R(L) = .1

R(T) = .1

FREQ = 5 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

BIAXIAL RATIO = 1

SPECIMEN FAILED THROUGH LOADING ARM AT N=238580 CYCLES

PRIOR TO CRACK INITIATION AT THE HOLE

SPECIMEN 7-74

TEST CASE 19

PAGE 2

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	44.8	44.8	238580	0	0	0	0

CRACK GROWTH TEST OF 7075-T7 TEST CASE 87 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-80 FLAM TYPE -4

TEMP = 76 F

REL HUM = 52 %

06-23-77

B = .184 IN

R(L) = .1

R(T) = .1

FREQ = 5 HZ

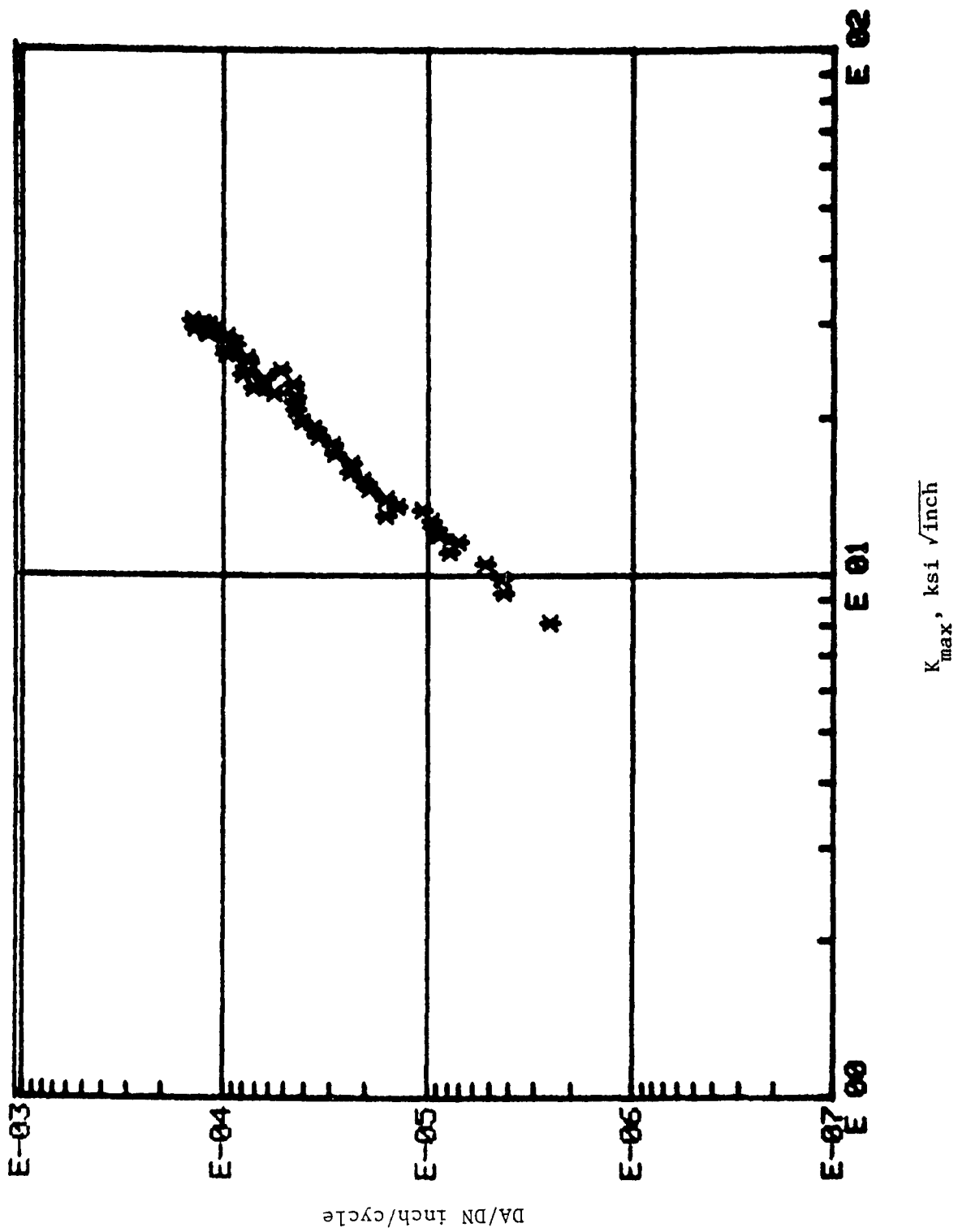
PHASE ANGLE = 0

GRID SPACING = .05 IN

BIAXIAL RATIO = 1

REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	29.8	29.8	0	4	2.3	187	-7
2	29.8	29.8	14770	4.5	3.8	185	-6
3	29.8	29.8	20100	5	4.2	184	-5
4	29.8	29.8	26370	5.5	4.8	183	-4
5	29.8	29.8	30150	6	5.1	183	-3
6	29.8	29.8	34600	6.5	6	183	-2
7	29.8	29.8	37400	7	6.3	183	-2
8	29.8	29.8	40240	7.5	6.8	182	-2
9	29.8	29.8	42900	8	7.3	182	-2
10	29.8	29.8	45510	8.5	7.8	182	-2
11	29.8	29.8	47070	9	8.3	182	-2
12	29.8	29.8	49430	9.5	8.8	182	-2
13	29.8	29.8	51200	10	9.3	182	-1
14	29.8	29.8	54630	11.1	10.4	182	-1
15	29.8	29.8	57230	12.1	11.4	182	-1
16	29.8	29.8	59390	13	12.3	182	-1
17	29.8	29.8	61490	14	13.3	182	-1
18	29.8	29.8	63610	15	14.3	182	0
19	29.8	29.8	65450	16	15.4	181	0
20	29.8	29.8	67170	17	16.4	181	0
21	29.8	29.8	68630	18	17.4	181	0
22	29.8	29.8	70090	19	18.5	181	0
23	29.8	29.8	71310	20	19.5	180	0
24	29.8	29.8	72380	21	20.4	180	-1
25	29.8	29.8	73490	22	21.4	180	-1
26	29.8	29.8	74570	23	22.3	180	-1
27	29.8	29.8	75370	24	23.1	180	-1
28	29.8	29.8	76080	25	24.1	180	-1
29	29.8	29.8	77180	26	25.1	180	-2
30	29.8	29.8	77970	27	26.1	179	-2
31	29.8	29.8	78560	28	27	179	-2
32	29.8	29.8	79520	29	28	179	-2
33	29.8	29.8	80160	30	29	179	-2
34	29.8	29.8	80830	31	30	179	-2
35	29.8	29.8	81490	32	31	179	-2
36	29.8	29.8	82010	33	32	179	-2
37	29.8	29.8	82560	34	33	179	-2
38	29.8	29.8	83080	35	34	179	-3
39	29.8	29.8	83650	36	35	179	-3
40	29.8	29.8	84270	37	36.4	178	-3
41	29.8	29.8	84770	38	37.3	178	-3
42	29.8	29.8	85190	39	38.3	178	-3
43	29.8	29.8	85580	40	39.2	178	-3
44	29.8	29.8	85910	41	40	178	-3
45	29.8	29.8	86320	41.9	41	178	-3
46	29.8	29.8	86780	43	42.2	178	-3
47	29.8	29.8	87120	44	43.1	178	-3

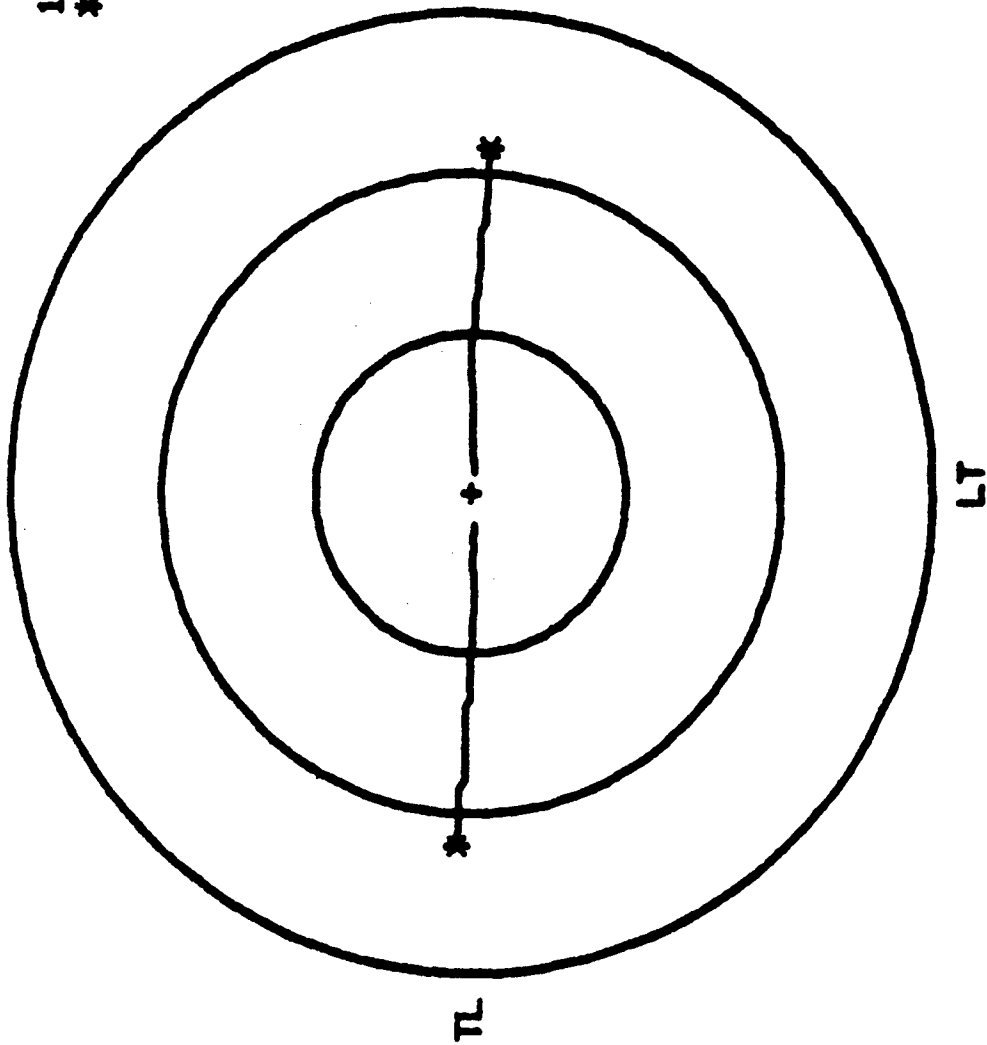
SPECIMEN 7-80 TEST CASE 87



SPECIMEN 7-88

TEST CASE 87

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 7075-T7 TEST CASE 89 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-30 FLAW TYPE = 5

TEMP = 75 F REL HUM = 50 % 6-15-77

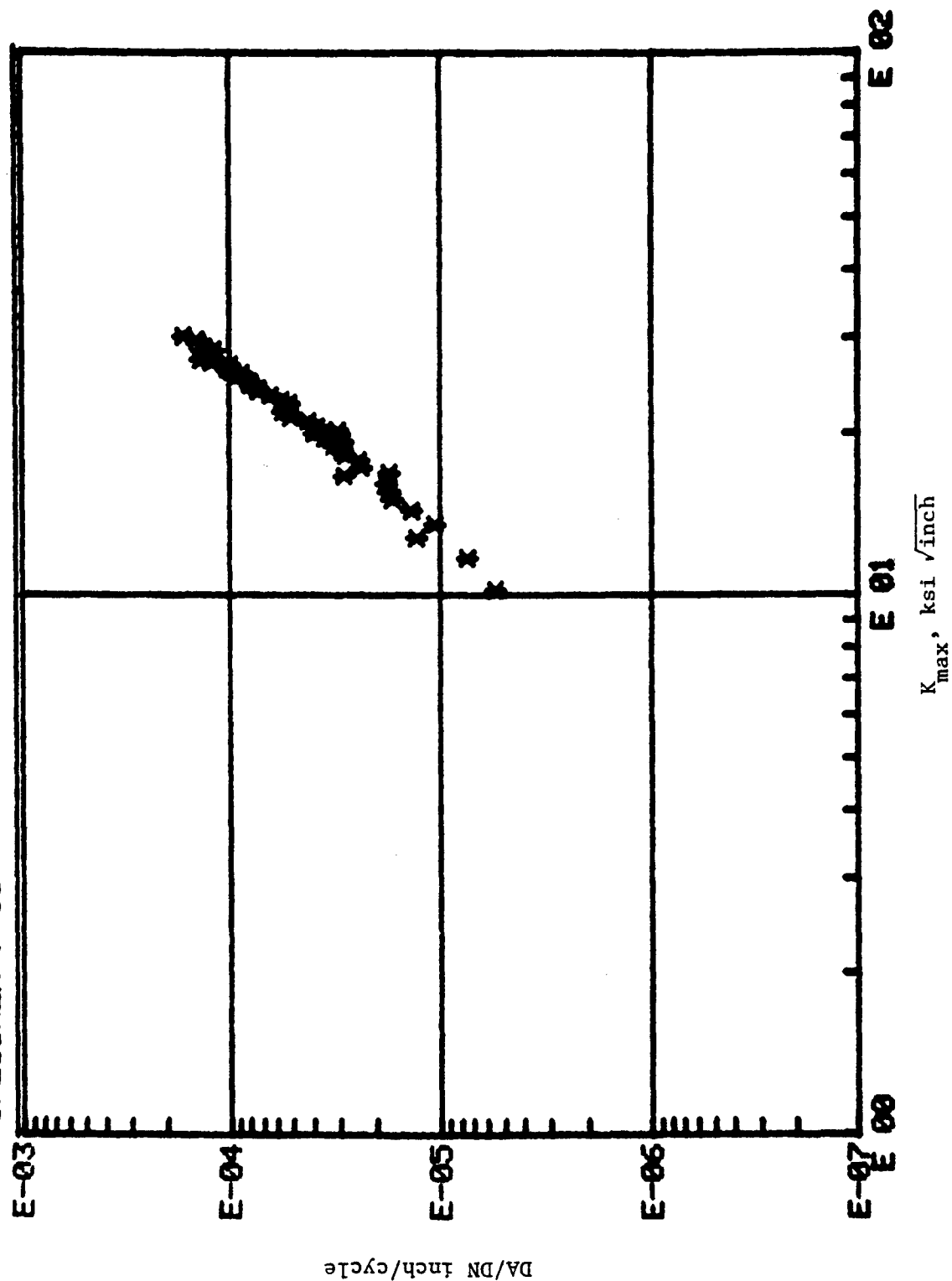
B = .179 IN RCL = .1 RCT = .1

FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 1



SPECIMEN 7-30 TEST CASE 89

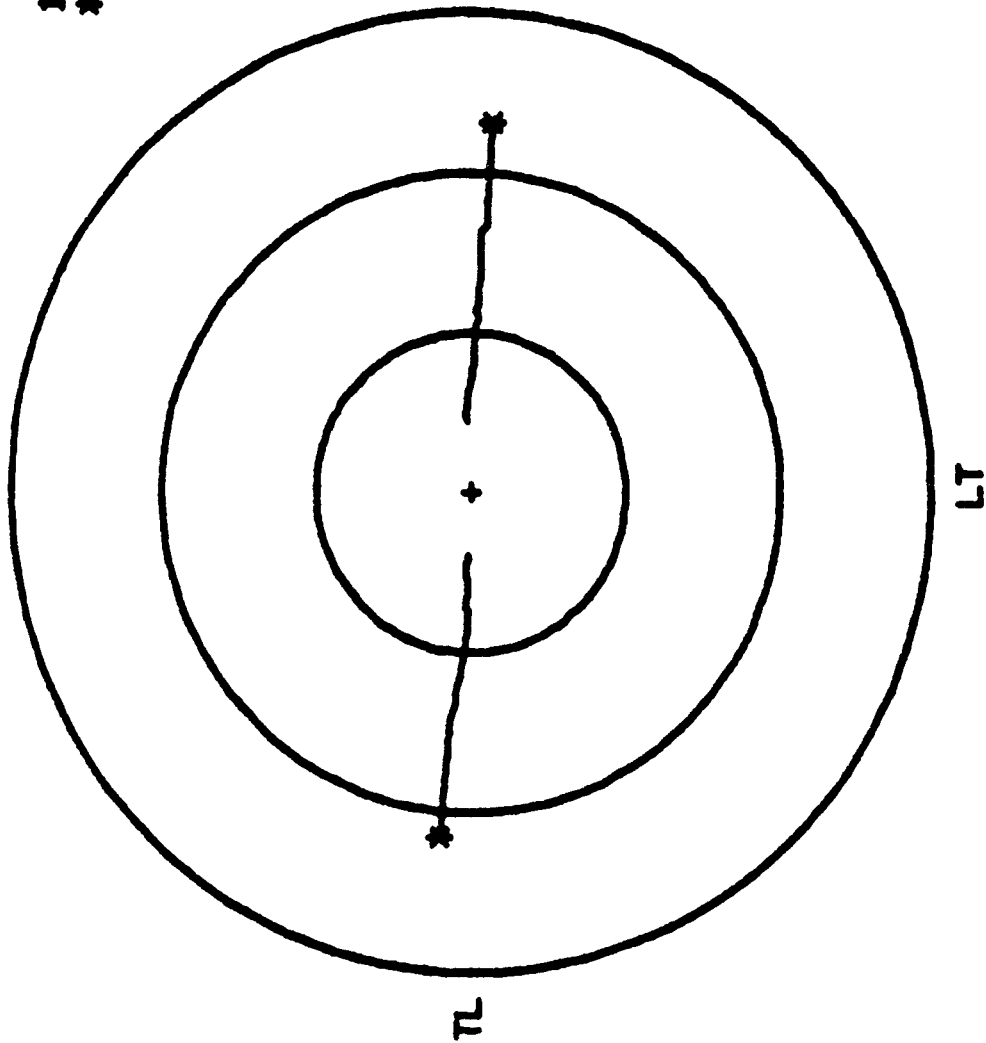


REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	29.8	29.8	0	8	9	177	4
2	29.8	29.8	6370	8.5	9.9	177	4
3	29.8	29.8	10400	9	10.6	177	3
4	29.8	29.8	12710	9.5	11.3	177	3
5	29.8	29.8	15080	10	11.8	177	3
6	29.8	29.8	17470	10.5	12.6	177	2
7	29.8	29.8	18810	11	13	178	2
8	29.8	29.8	20240	11.5	13.5	178	1
9	29.8	29.8	21640	12	14	178	1
10	29.8	29.8	22780	12.5	14.8	178	0
11	29.8	29.8	23780	13	15	178	0
12	29.8	29.8	24840	13.5	15.5	178	0
13	29.8	29.8	25980	14	16.1	178	-1
14	29.8	29.8	26790	14.5	16.5	178	-1
15	29.8	29.8	27650	15	17	179	-1
16	29.8	29.8	28510	15.5	17.6	179	-1
17	29.8	29.8	29290	16	18	179	-1
18	29.8	29.8	30000	16.5	18.5	179	-1
19	29.8	29.8	30700	17	19.1	179	-1
20	29.8	29.8	31440	17.5	19.5	179	-1
21	29.8	29.8	32610	18.4	20.4	178	-1
22	29.8	29.8	33320	19	21	178	-1
23	29.8	29.8	34300	20	22	178	-2
24	29.8	29.8	35200	21	23	178	-1
25	29.8	29.8	36000	22	23.7	177	-2
26	29.8	29.8	37020	23	24.8	177	-2
27	29.8	29.8	37910	24	25.8	176	-2
28	29.8	29.8	38900	25.2	27.1	176	-2
29	29.8	29.8	39490	26	28	176	-2
30	29.8	29.8	40250	27	29.2	176	-2
31	29.8	29.8	40910	28	30.3	175	-2
32	29.8	29.8	41620	29.1	31.5	175	-2
33	29.8	29.8	42260	30.3	32.7	175	-2
34	29.8	29.8	42770	31.2	33.6	175	-3
35	29.8	29.8	43160	32	34.3	175	-3
36	29.8	29.8	43620	33	35.2	175	-3
37	29.8	29.8	44150	34	36.3	175	-3
38	29.8	29.8	44680	35.1	37.4	175	-3
39	29.8	29.8	44950	36	38.4	175	-3
40	29.8	29.8	45350	37	39.5	175	-3
41	29.8	29.8	45750	38	40.5	175	-3
42	29.8	29.8	46170	39	41.5	175	-3
43	29.8	29.8	46570	40	42.6	175	-3
44	29.8	29.8	47000	41	44	175	-3
45	29.8	29.8	47350	42	45	175	-3
46	29.8	29.8	47700	43	46.3	175	-3

SPECIMEN 7-30

TEST CASE 89

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 7075-T7 TEST CASE 98 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-100 FLAW TYPE - 5

TEMP = 70 F

REL HUM = 58 %

6-27-77

B = .169 IN

R(L) = .1

R(T) = .1

FREQ = 5 HZ

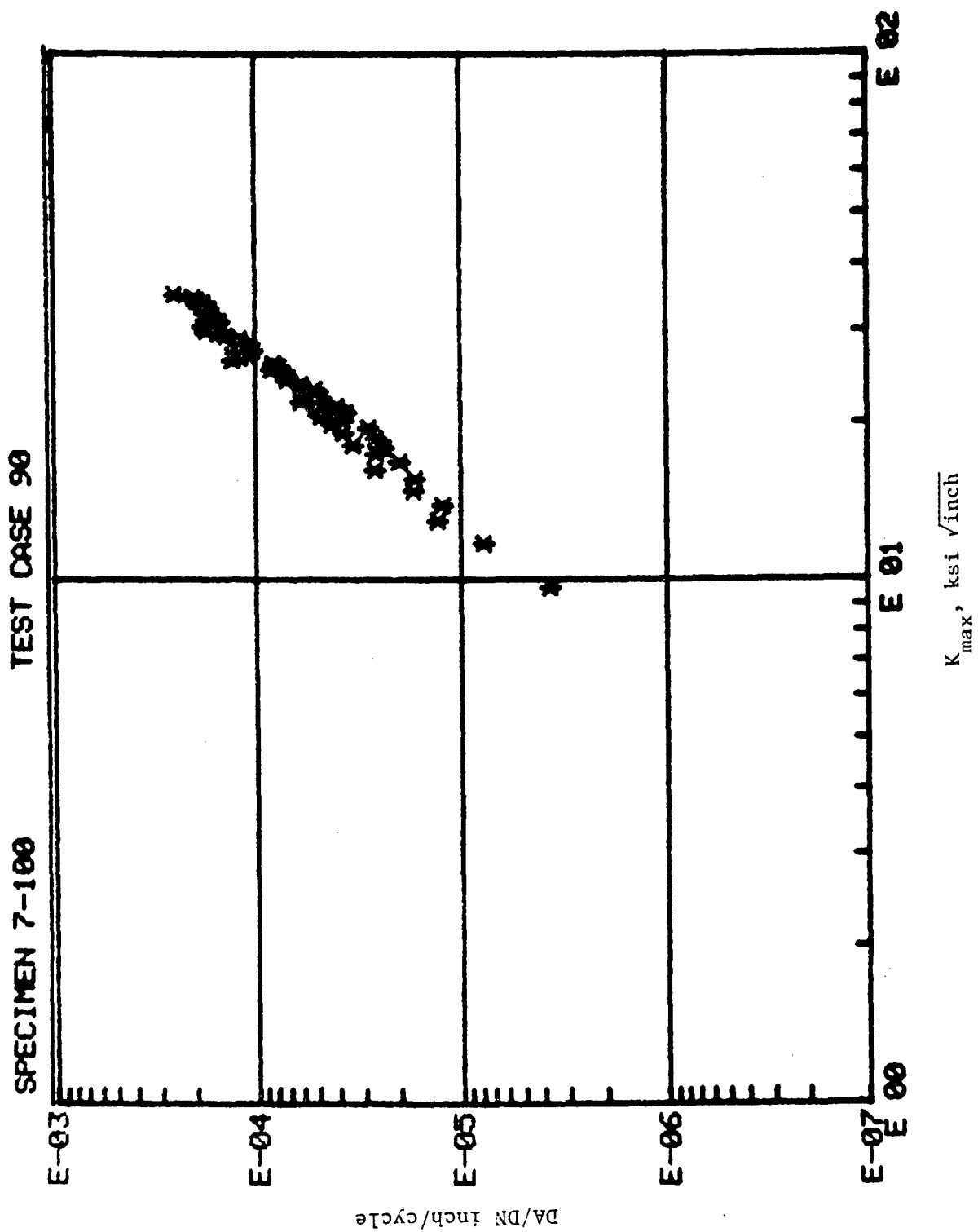
PHASE ANGLE = 0

GRID SPACING = .05 IN

BIAXIAL RATIO = 1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	29.8	29.8	0	7.8	8.5	180	-3
2	29.8	29.8	9500	8.7	9	180	-2
3	29.8	29.8	13730	9.5	9.5	180	-2
4	29.8	29.8	15670	10	10	180	-2
5	29.8	29.8	18350	10.8	10.5	180	-2
6	29.8	29.8	19960	11.4	11	180	-2
7	29.8	29.8	21760	12	11.6	180	-2
8	29.8	29.8	22620	12.5	12	180	-1
9	29.8	29.8	23880	13	12.5	180	-1
10	29.8	29.8	24850	13.5	13	180	0
11	29.8	29.8	25910	14	13.5	180	0
12	29.8	29.8	26740	14.6	14	180	0
13	29.8	29.8	27720	15.1	14.5	180	0
14	29.8	29.8	28460	15.7	15	180	0
15	29.8	29.8	29180	16	15.5	180	0
16	29.8	29.8	29770	16.5	16	180	1
17	29.8	29.8	30440	17	16.5	180	1
18	29.8	29.8	30970	17.5	17	180	1
19	29.8	29.8	31660	18	17.5	180	1
20	29.8	29.8	32110	18.4	18	180	1
21	29.8	29.8	32800	19	18.5	180	1
22	29.8	29.8	33220	19.5	19	180	2
23	29.8	29.8	34270	20.5	20	179	2
24	29.8	29.8	35150	21.5	21	179	3
25	29.8	29.8	36080	22.4	22	180	3
26	29.8	29.8	36880	23.3	23	180	3
27	29.8	29.8	37600	24.3	24	179	3
28	29.8	29.8	38330	25.3	25	179	3
29	29.8	29.8	38980	26.2	26	179	3
30	29.8	29.8	39550	27.1	27	179	4
31	29.8	29.8	40200	28.1	28	179	4
32	29.8	29.8	40780	29	29	179	4
33	29.8	29.8	41170	30	30	179	4
34	29.8	29.8	41590	31	31	179	4
35	29.8	29.8	42050	32	32	180	4
36	29.8	29.8	42510	32.9	33	180	4
37	29.8	29.8	42910	33.9	34	180	4
38	29.8	29.8	43330	34.8	35	180	4
39	29.8	29.8	43750	35.8	36	180	4
40	29.8	29.8	44150	36.7	37	180	5
41	29.8	29.8	44510	37.7	38	180	5
42	29.8	29.8	44840	38.7	39	180	5
43	29.8	29.8	45160	39.9	40	180	5
44	29.8	29.8	45440	40.9	41	180	5
45	29.8	29.8	45750	41.8	42	180	5
46	29.8	29.8	46070	42.7	43	180	5
47	29.8	29.8	46370	43.7	44	180	5
48	29.8	29.8	46710	44.9	45	180	5
49	29.8	29.8	47000	45.9	46	181	6
50	29.8	29.8	47300	46.9	47	181	6

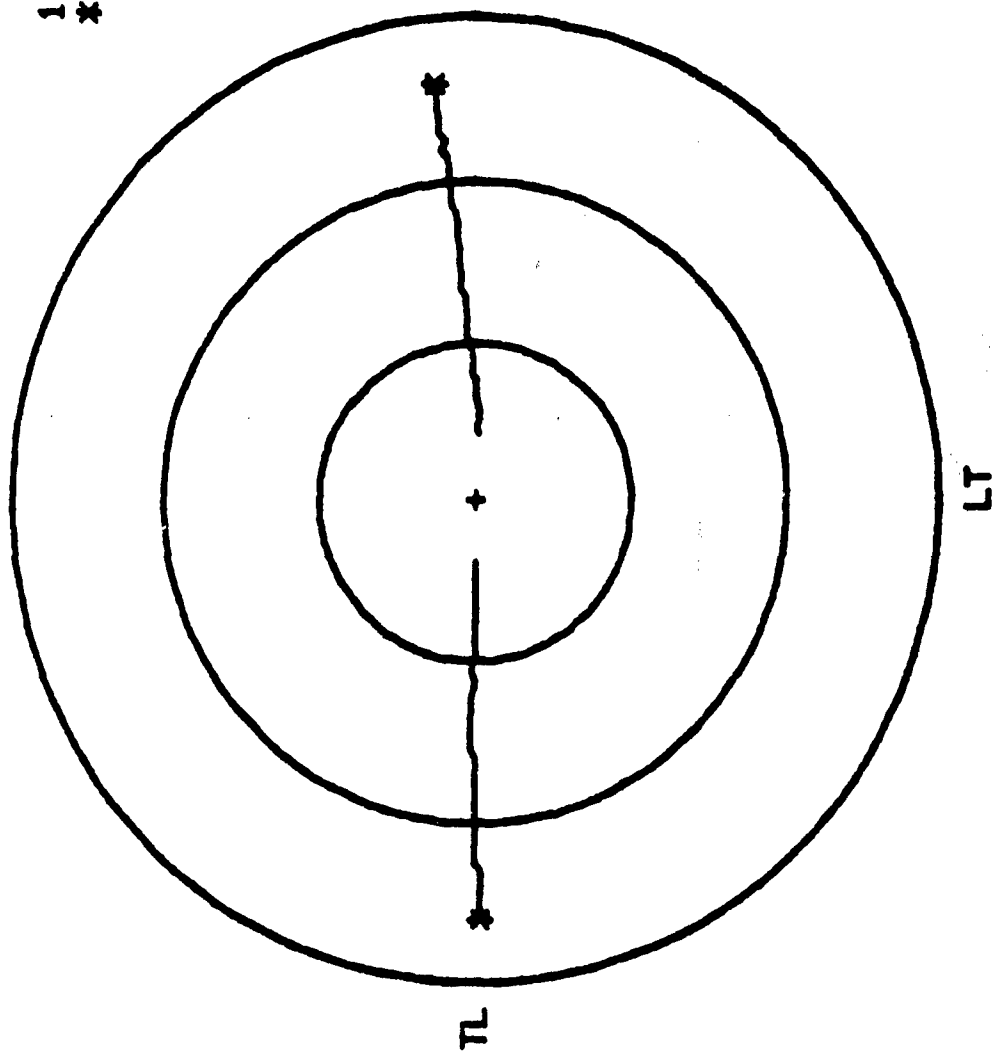
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	29.8	29.8	47590	48	48	181	6
52	29.8	29.8	47840	48.8	49	181	6
53	29.8	29.8	48100	49.8	50	181	6
54	29.8	29.8	48360	50.9	51	181	6
55	29.8	29.8	48570	52	52	181	6



SPECIMEN 7-100

TEST CASE 90

1 IN SPACING  
\* TEST STOPPED



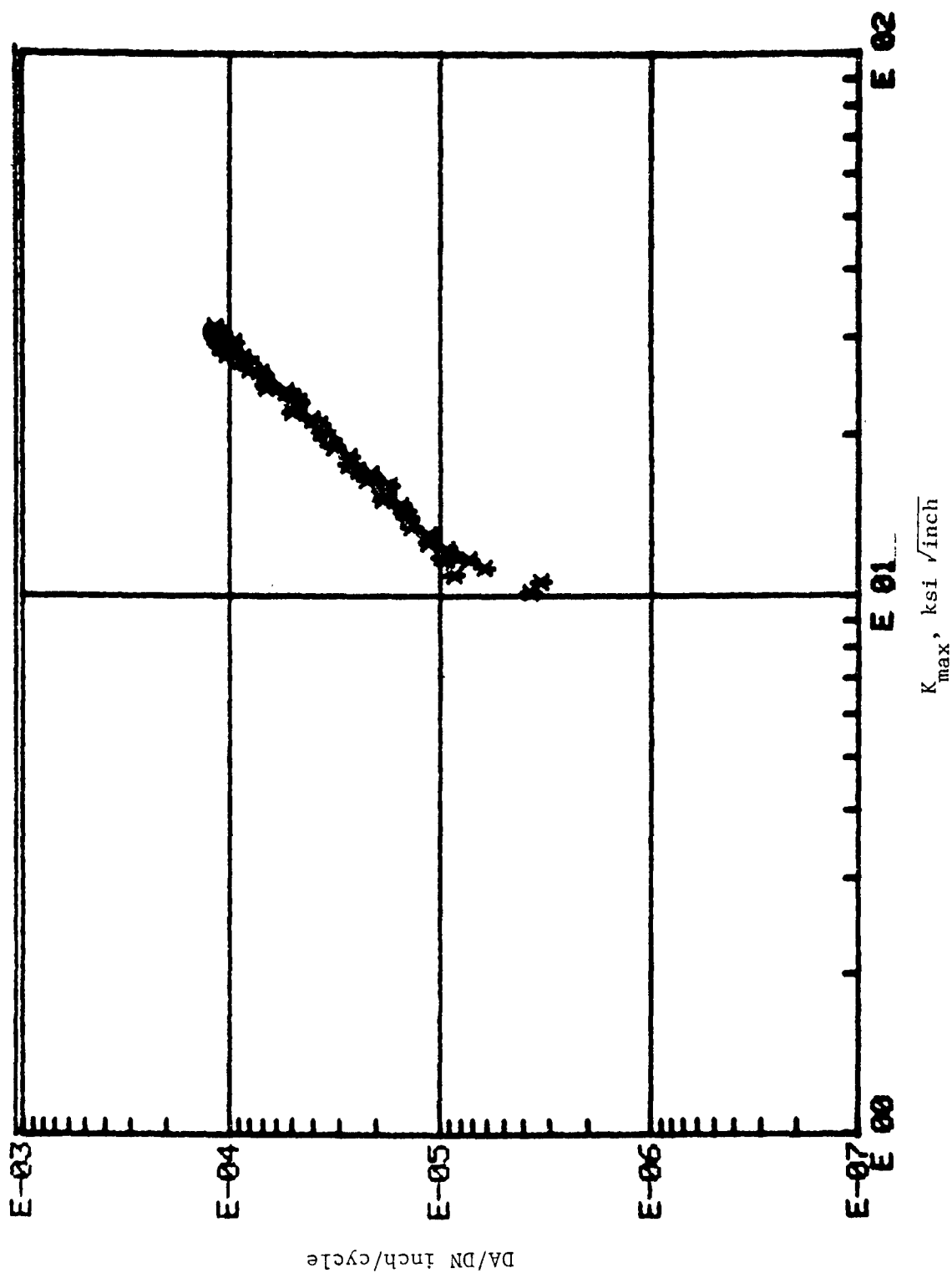


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CRACK GROWTH TEST OF 7075-T7 TEST CASE 80 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-93 FLAW TYPE - 4  
TEMP = 72 F REL HUM = 58 % 07-13-77  
B = .175 IN RCL = .1 RCT = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -1  
-----

REF #	P/LD KIPS	P/TJ KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.4	-17.4	0	2.9	2.9	182	-3
2	17.4	-17.4	2000	3	3.1	183	-2
3	17.4	-17.4	3500	3.1	3.2	182	-2
4	17.4	-17.4	5250	3.4	3.5	182	-2
5	17.4	-17.4	9320	3.9	4	182	-2
6	17.4	-17.4	12750	4.4	4.5	182	-2
7	17.4	-17.4	15450	4.9	5	182	-2
8	17.4	-17.4	18000	5.4	5.5	181	-2
9	17.4	-17.4	20750	5.8	6.1	181	-3
10	17.4	-17.4	23690	6.4	6.6	181	-3
11	17.4	-17.4	25440	6.8	7	181	-3
12	17.4	-17.4	27870	7.4	7.5	180	-3
13	17.4	-17.4	29510	7.8	8	180	-3
14	17.4	-17.4	31640	8.4	8.6	180	-3
15	17.4	-17.4	32810	8.7	9	180	-3
16	17.4	-17.4	34450	9.2	9.5	180	-3
17	17.4	-17.4	35910	9.8	10	180	-3
18	17.4	-17.4	37280	10.3	10.5	180	-3
19	17.4	-17.4	38620	10.8	11	180	-3
20	17.4	-17.4	39910	11.2	11.5	180	-3
21	17.4	-17.4	41150	11.8	12	180	-3
22	17.4	-17.4	42210	12.2	12.5	179	-3
23	17.4	-17.4	43120	12.6	13	179	-3
24	17.4	-17.4	45140	13.3	14	179	-3
25	17.4	-17.4	46920	14.7	15	179	-3
26	17.4	-17.4	48560	15.7	16.1	179	-3
27	17.4	-17.4	49870	16.6	17	178	-3
28	17.4	-17.4	51310	17.7	18	178	-3
29	17.4	-17.4	52580	18.6	19	178	-4
30	17.4	-17.4	53810	19.6	20	178	-3
31	17.4	-17.4	54810	20.6	21	178	-4
32	17.4	-17.4	55960	21.7	22.1	178	-4
33	17.4	-17.4	56820	22.4	23	178	-4
34	17.4	-17.4	57770	23.3	24	178	-4
35	17.4	-17.4	58700	24.3	25	177	-3
36	17.4	-17.4	59410	25.2	26	177	-3
37	17.4	-17.4	60160	26.2	27	177	-3
38	17.4	-17.4	60840	27.1	28	177	-3
39	17.4	-17.4	61510	28	29	177	-3
40	17.4	-17.4	62160	29.1	30	177	-3
41	17.4	-17.4	62760	30	31	177	-3
42	17.4	-17.4	63390	31.1	32.1	177	-3
43	17.4	-17.4	63940	32.1	33	177	-3
44	17.4	-17.4	64450	33.2	34	177	-3
45	17.4	-17.4	64940	34.1	35	177	-3
46	17.4	-17.4	65440	35.2	36.1	177	-3
47	17.4	-17.4	65910	36.1	37	177	-3
48	17.4	-17.4	66410	37.2	38	177	-3
49	17.4	-17.4	66840	38.2	39	177	-3
50	17.4	-17.4	67240	39.1	40	177	-3

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	17.4	-17.4	67650	40	41	177	-3
52	17.4	-17.4	68000	41	42	178	-3

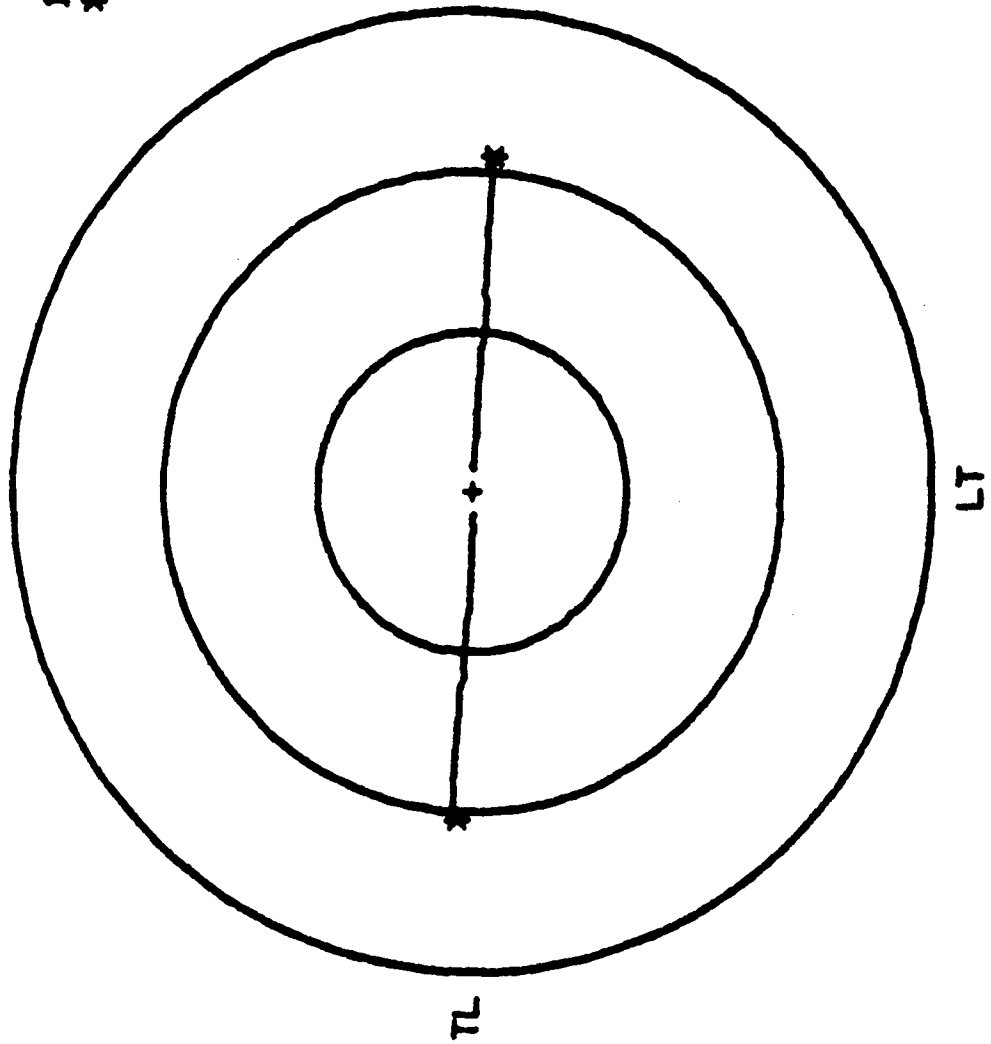
SPECIMEN 7-93 TEST CASE 88



SPECIMEN 7-93

TEST CASE 88

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 7075-T7 TEST CASE 91 PAGE 1

CROSSIFORM SPECIMEN TYPE SPEC 7-89 FLAW TYPE = 5

TEMP = 74 F REL HUM = 44% 7-19-77

B = .174 IN

RCL = .11

RCT = .11

FREQ = 5 HZ

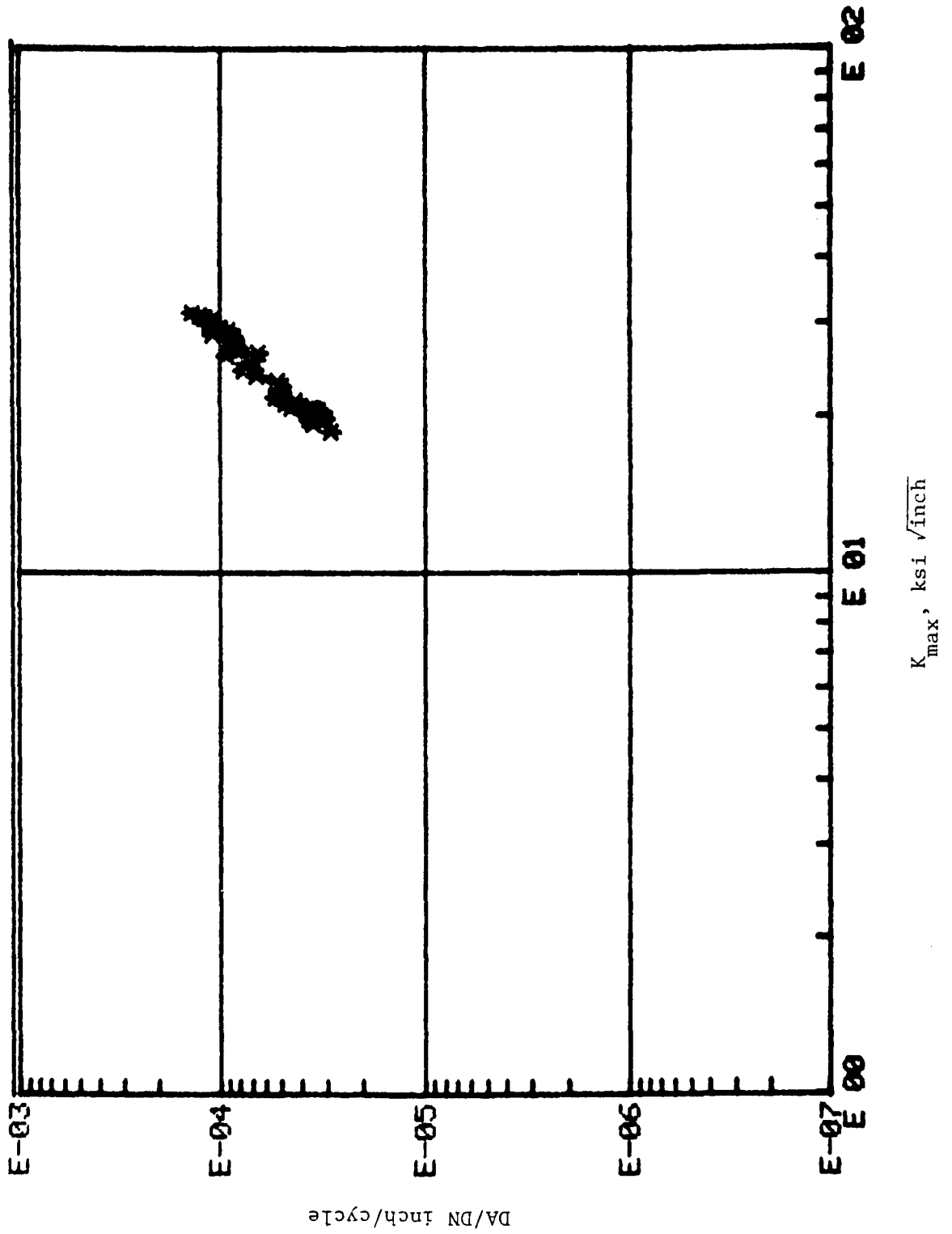
PHASE ANGLE = 0

GRID SPACING = .005 IN

BIAXIAL RATIO = -1

REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.4	-17.4	0	9	9.2	183	0
2	17.4	-17.4	1300	9.8	9.9	183	0
3	17.4	-17.4	2150	10.4	10.5	183	0
4	17.4	-17.4	2900	11	11	183	0
5	17.4	-17.4	3630	11.5	11.4	183	0
6	17.4	-17.4	4330	12	11.8	183	0
7	17.4	-17.4	5070	12.5	12.4	183	0
8	17.4	-17.4	5900	13	13	183	0
9	17.4	-17.4	6600	13.5	13.5	183	0
10	17.4	-17.4	7200	14	13.9	183	0
11	17.4	-17.4	7950	14.6	14.4	183	0
12	17.4	-17.4	8670	15	15	183	0
13	17.4	-17.4	9730	16	15.9	183	0
14	17.4	-17.4	10970	17	16.9	183	1
15	17.4	-17.4	12010	18	17.9	183	0
16	17.4	-17.4	13120	19	18.8	183	0
17	17.4	-17.4	14010	20	19.7	183	0
18	17.4	-17.4	15000	21	20.7	183	1
19	17.4	-17.4	16040	22	21.8	183	1
20	17.4	-17.4	16950	23	22.7	183	1
21	17.4	-17.4	17710	24	23.7	183	1
22	17.4	-17.4	18400	25	24.3	183	1
23	17.4	-17.4	19060	26	25.7	183	1
24	17.4	-17.4	19750	27	26.6	183	1
25	17.4	-17.4	20340	28	27.8	183	1
26	17.4	-17.4	20990	29	28.5	183	1
27	17.4	-17.4	21590	30	29.5	183	1
28	17.4	-17.4	22220	31.1	30.5	182	1
29	17.4	-17.4	22720	32	31.4	182	1
30	17.4	-17.4	23240	33	32.2	182	1
31	17.4	-17.4	23790	34	33.1	182	1
32	17.4	-17.4	24250	35	34.1	182	1
33	17.4	-17.4	24770	36	35	182	1
34	17.4	-17.4	25270	37	36	182	1
35	17.4	-17.4	25720	38	37	182	1
36	17.4	-17.4	26200	39	38.1	182	1
37	17.4	-17.4	26620	40	39.1	182	1
38	17.4	-17.4	27060	41	40.3	182	1
39	17.4	-17.4	27480	42.1	41.5	182	1

SPECIMEN 7-89 TEST CASE 91

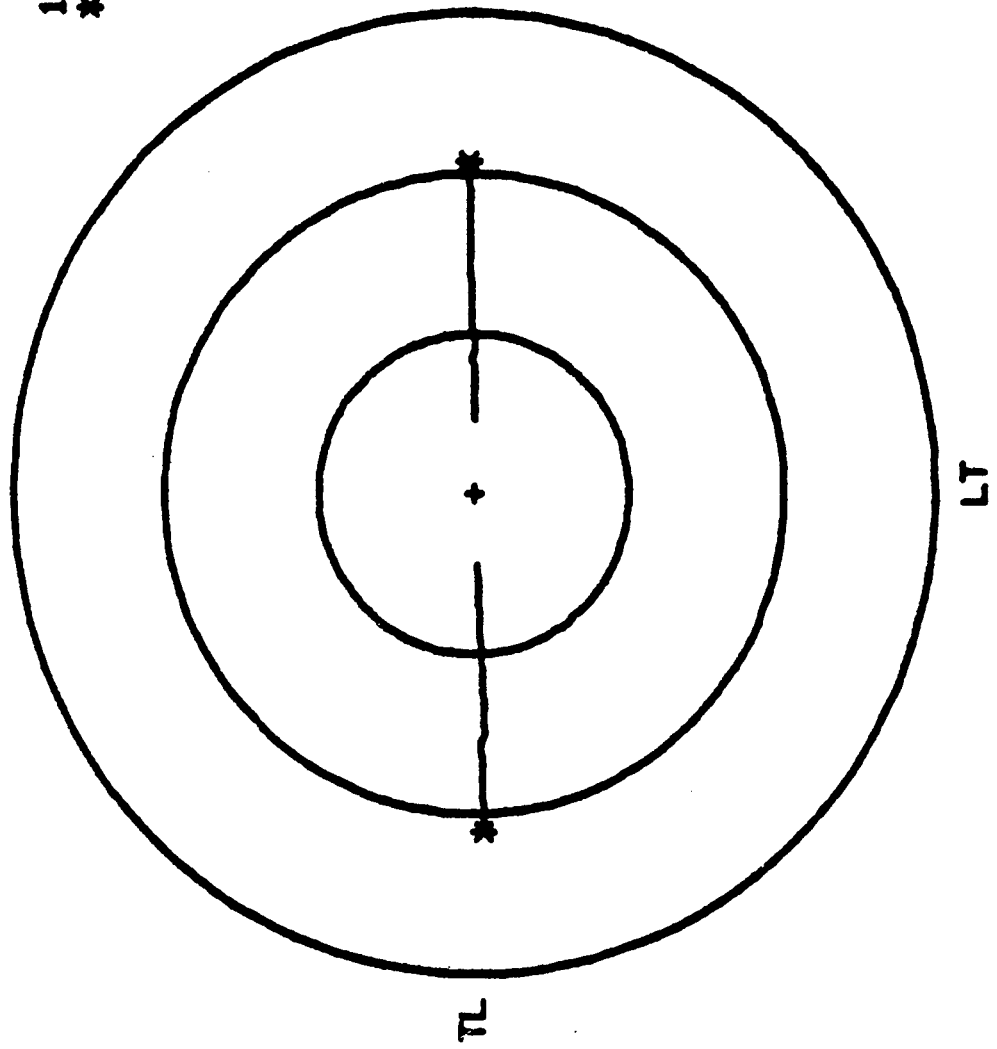




SPECIMEN 7-89

TEST CASE 91

1 IN SPACING  
\* TEST STOPPED

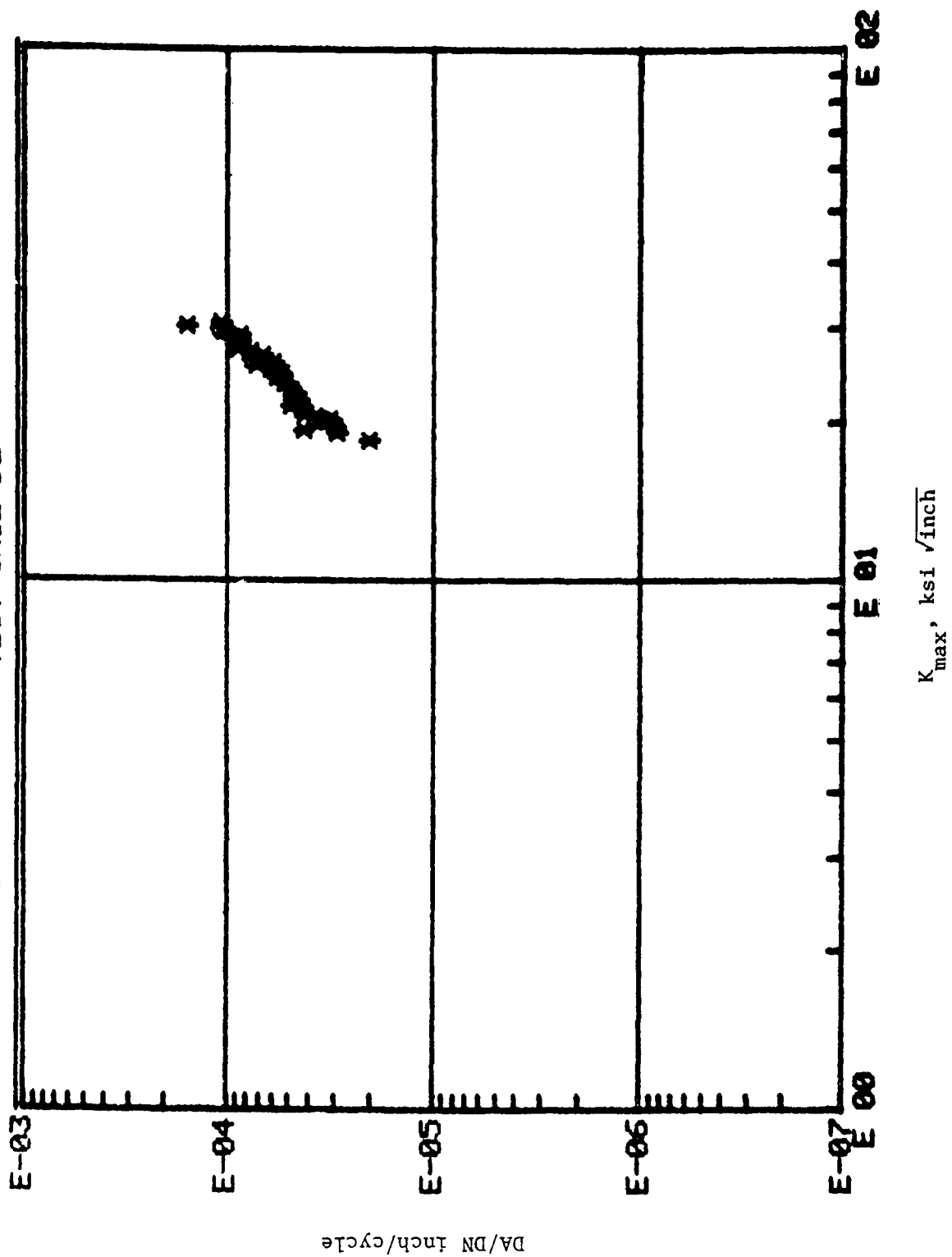


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CRACK GROWTH TEST OF 7075-T7 TEST CASE 92 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-84 FLAW TYPE - 5  
TEMP = 76 F REL HUM = 47 % 7-27-77  
B = .178 IN RCL = 1 RIT = 1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID GRADING = .05 IN  
BIAXIAL RATIO = -1  
-----

REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.4	-17.4	0	9	9	179	0
2	17.4	-17.4	3170	10	10.6	180	0
3	17.4	-17.4	4200	10.5	11.3	180	-1
4	17.4	-17.4	4730	11	11.7	180	-1
5	17.4	-17.4	6390	12	12.7	180	-1
6	17.4	-17.4	7990	13	13.8	181	-1
7	17.4	-17.4	9320	14	14.7	181	-1
8	17.4	-17.4	10910	15	15.9	181	-1
9	17.4	-17.4	12490	16	16.9	181	-1
10	17.4	-17.4	13820	17	17.9	181	-1
11	17.4	-17.4	15020	18	18.9	181	-1
12	17.4	-17.4	16170	19	19.9	181	-1
13	17.4	-17.4	17190	20	20.9	182	-1
14	17.4	-17.4	18250	21	21.8	182	-1
15	17.4	-17.4	19310	22	22.8	182	-1
16	17.4	-17.4	20330	23	23.8	182	-1
17	17.4	-17.4	21330	24	24.9	182	-1
18	17.4	-17.4	22120	25	25.7	182	-1
19	17.4	-17.4	22990	26	26.6	182	-2
20	17.4	-17.4	23770	27	27.5	182	-2
21	17.4	-17.4	24430	28	28.4	182	-2
22	17.4	-17.4	25270	29	29.4	182	-2
23	17.4	-17.4	26000	30	30.6	182	-2
24	17.4	-17.4	26750	31	31.6	182	-2
25	17.4	-17.4	27430	32	32.7	182	-1
26	17.4	-17.4	27990	33	33.7	182	-1
27	17.4	-17.4	28590	34	34.8	182	-1
28	17.4	-17.4	29140	35	35.7	182	-1
29	17.4	-17.4	29670	36	36.7	182	-1
30	17.4	-17.4	30340	37	38	182	-1
31	17.4	-17.4	30820	38	39	182	-1
32	17.4	-17.4	31290	39	40	182	-1
33	17.4	-17.4	31740	40	41.8	182	-1
34	17.4	-17.4	32190	41	42.7	182	-1

SPECIMEN 7-04

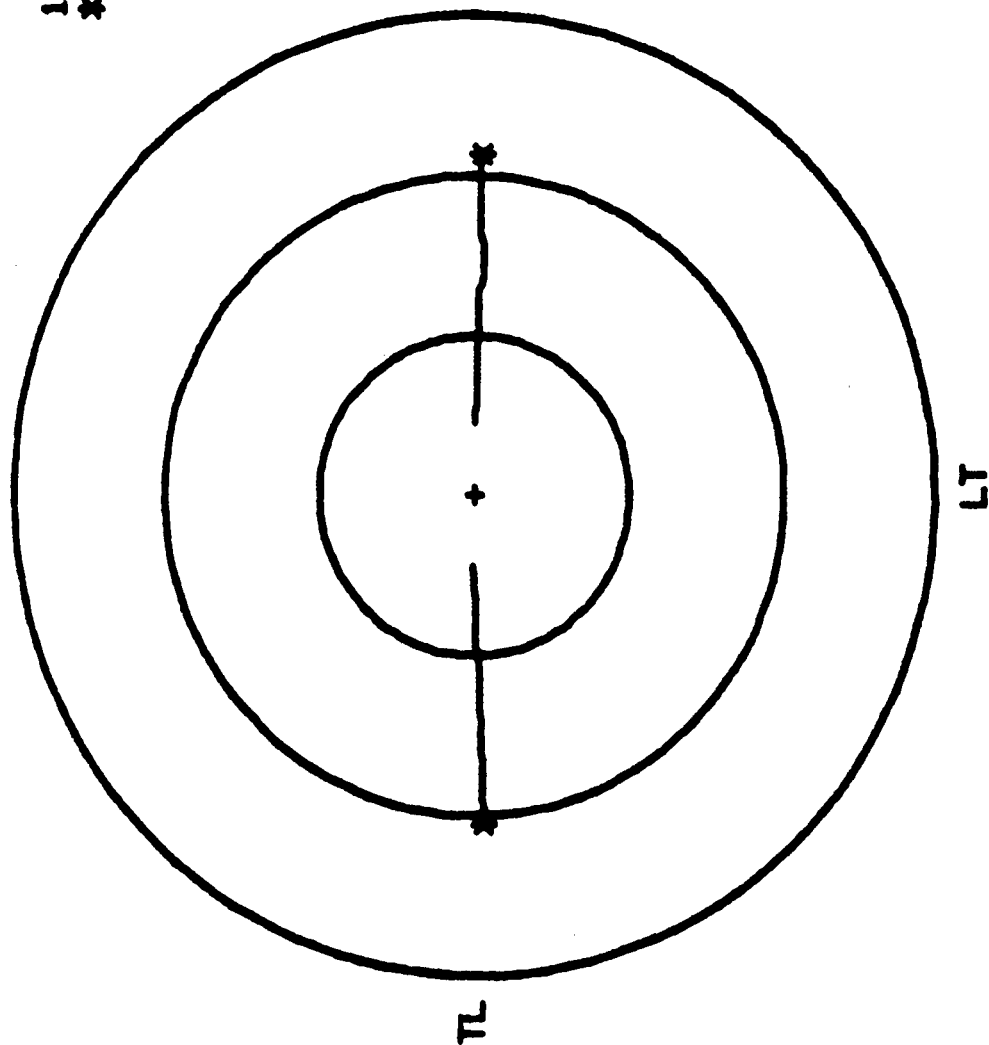
TEST CASE 92



SPECIMEN 7-04

TEST CASE 92

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 7075-T7 TEST CASE 99 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC 7-114 FLAW TYPE - 7

TEMP = 75 F

REL HUM = 58 %

12/5/77

B = .179 IN

R(L) = .1

R(T) = .1

FREQ = 10 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

BIAXIAL RATIO = 0

Overload Ratio = 2.0

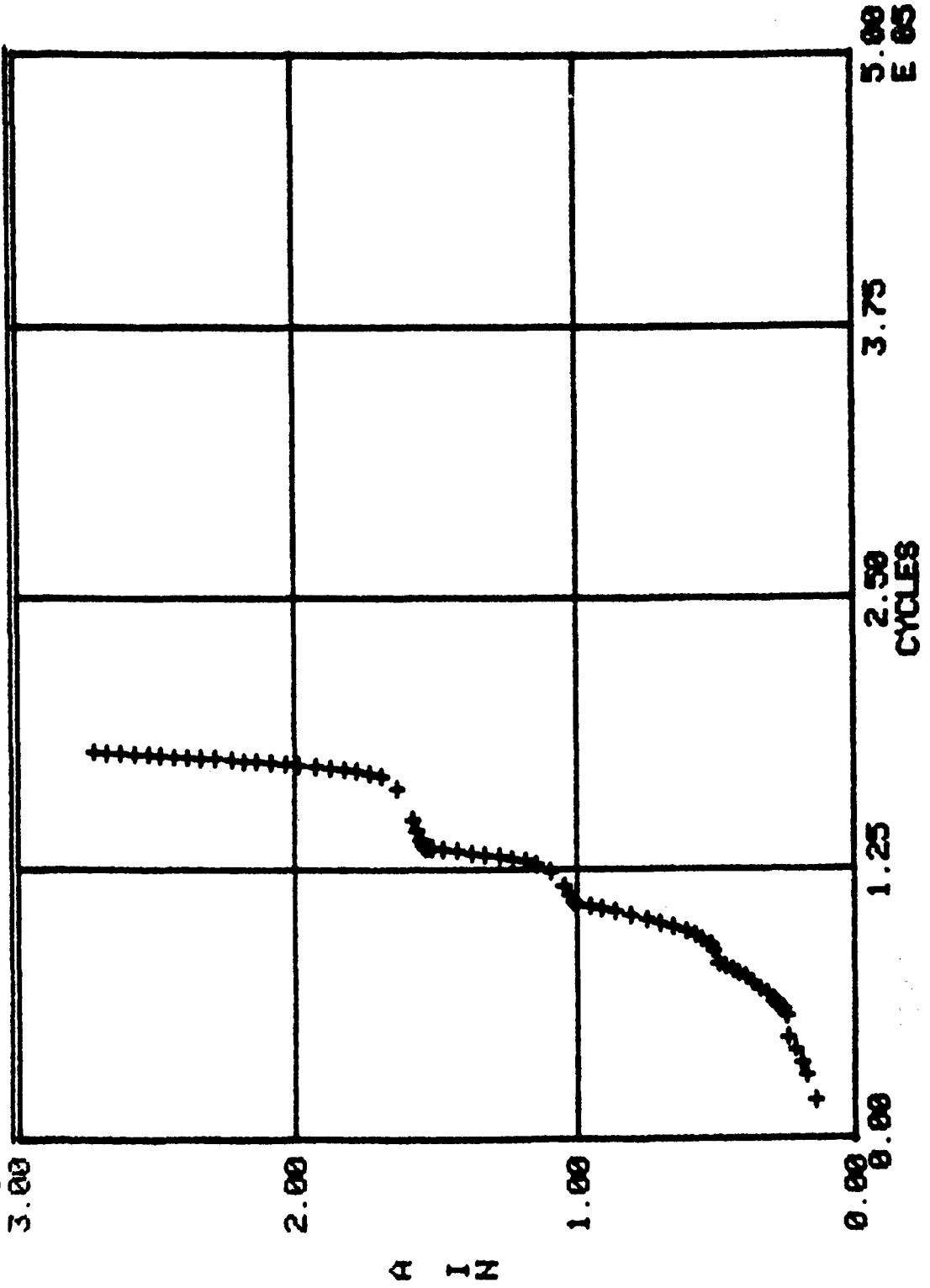
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	23.65	6.3	0	2.3	2.2	180	-1
2	23.65	6.3	18500	3	2.8	180	-2
3	23.65	6.3	30200	3.6	3.5	180	-3
4	23.65	6.3	36150	4	3.9	180	-3
5	23.65	6.3	42200	4.5	4.4	180	-3
6	23.65	6.3	47850	5	5	180	-3
7	23.65	6.3	+1	5	5	180	-3
8	23.65	6.3	57890	5.1	5.1	180	-3
9	23.65	6.3	60740	5.3	5.4	180	-3
10	23.65	6.3	62140	5.5	5.7	180	-3
11	23.65	6.3	63710	5.7	5.9	180	-3
12	23.65	6.3	64940	6	6	180	-3
13	23.65	6.3	68330	6.5	6.5	180	-3
14	23.65	6.3	70480	7	7	180	-3
15	23.65	6.3	73340	7.5	7.6	180	-3
16	23.65	6.3	76020	8	8.1	180	-3
17	23.65	6.3	77870	8.5	8.7	180	-3
18	23.65	6.3	78910	9	9	180	-3
19	23.65	6.3	80730	9.5	9.5	180	-3
20	23.65	6.3	82120	10	10	180	-3
21	23.65	6.3	+1	10	10	180	-3
22	23.65	6.3	88540	10.3	10.4	180	-3
23	23.65	6.3	90700	10.5	10.7	180	-3
24	23.65	6.3	93600	11.1	11.3	180	-3
25	23.65	6.3	95160	11.6	11.8	180	-3
26	23.65	6.3	97000	12.2	12.4	180	-3
27	23.65	6.3	99350	13.2	13.4	180	-3
28	23.65	6.3	100970	14.1	14.2	180	-3
29	23.65	6.3	102800	15.1	15.2	179	-3
30	23.65	6.3	104630	16.2	16.2	178	-3
31	23.65	6.3	106340	17.3	17.4	178	-3
32	23.65	6.3	107600	18.2	18.3	178	-3
33	23.65	6.3	108790	19.1	19.2	178	-3
34	23.65	6.3	109650	20	20.1	178	-3
35	23.65	6.3	+1	20.1	20.2	178	-3
36	23.65	6.3	110830	20.3	20.4	178	-3
37	23.65	6.3	113850	20.6	20.7	178	-3
38	23.65	6.3	117550	21	21	179	-3
39	23.65	6.3	124930	22	21.9	179	-3
40	23.65	6.3	128030	23	22.8	179	-2
41	23.65	6.3	129460	24	23.4	180	-3
42	23.65	6.3	130500	25	24.3	180	-3
43	23.65	6.3	131480	26	25.1	180	-3
44	23.65	6.3	132450	27	26.2	180	-3
45	23.65	6.3	133050	28	27	180	-3
46	23.65	6.3	133250	29	28.1	180	-3
47	23.65	6.3	134750	30	29	180	-3
48	23.65	6.3	135190	30.6	29.9	180	-3
49	23.65	6.3	+1	30.8	30	180	-3
50	23.65	6.3	135530	31.1	30.3	180	-2

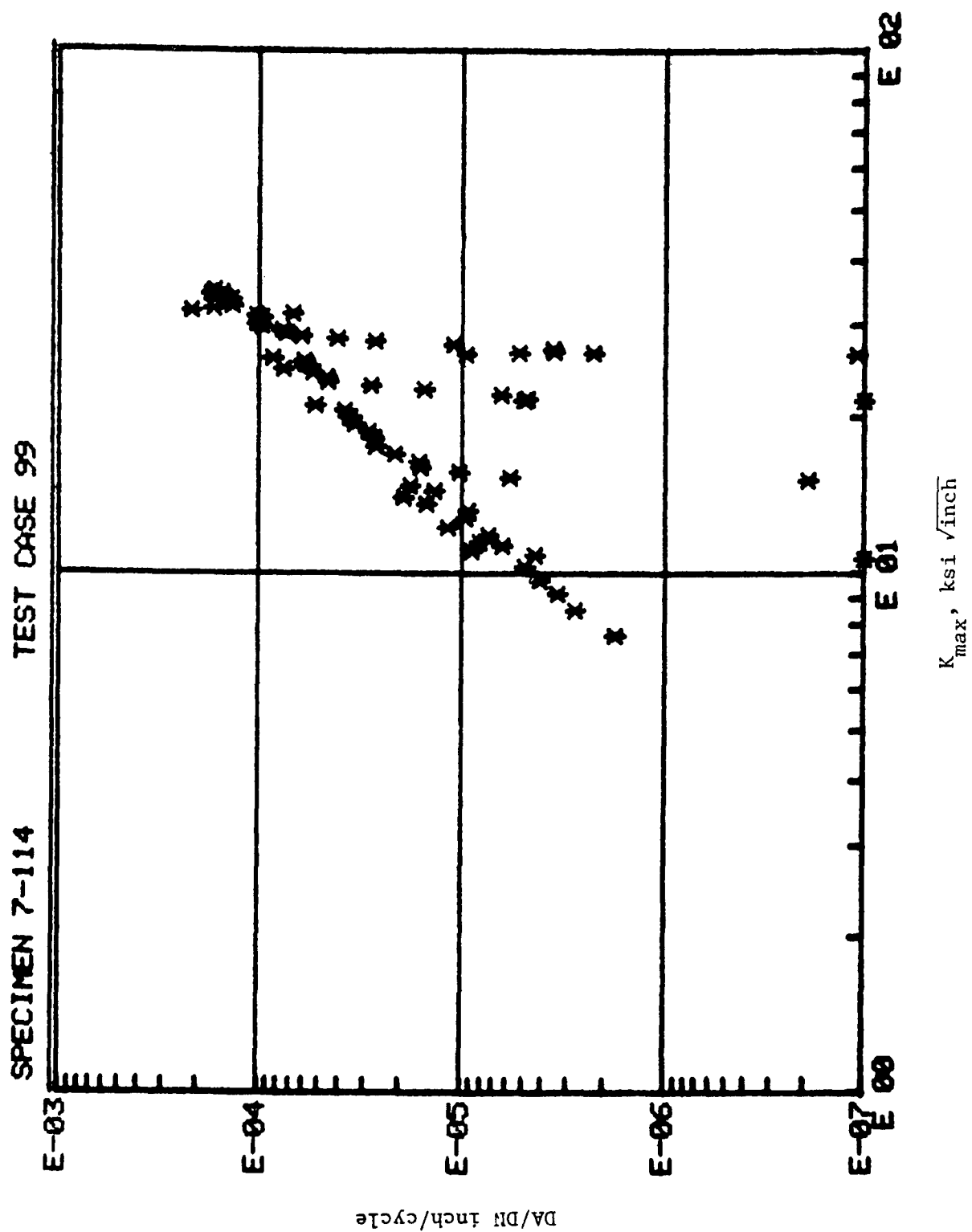
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	23.65	6.3	136580	31.3	30.5	180	-2
52	23.65	6.3	138940	31.5	30.8	180	-2
53	23.65	6.3	143360	31.8	30.9	180	-2
54	23.65	6.3	148310	32	31.4	180	-2
55	23.65	6.3	163030	33	32.5	179	-2
56	23.65	6.3	168260	34	33.8	179	-2
57	23.65	6.3	169840	35	34.5	179	-2
58	23.65	6.3	170990	36	35.4	179	-1
59	23.65	6.3	171640	37	36	179	-1
60	23.65	6.3	172360	38	37.1	179	-1
61	23.65	6.3	173020	39	38.1	178	-1
62	23.65	6.3	173640	40	39.5	178	0
63	23.65	6.3	174100	41	40.4	178	0
64	23.65	6.3	174630	42	41.5	178	0
65	23.65	6.3	175150	43	42.5	178	0
66	23.65	6.3	175590	44	43.3	178	0
67	23.65	6.3	176220	45	44	178	0
68	23.65	6.3	176500	46	45.4	179	0
69	23.65	6.3	176800	47	46.4	178	0
70	23.65	6.3	177170	48	47.4	178	0
71	23.65	6.3	177490	49	48.3	178	0
72	23.65	6.3	177820	50	49.3	178	0
73	23.65	6.3	178130	51	50	178	0
74	23.65	6.3	178460	52	51	178	0
75	23.65	6.3	178750	53	52	178	0
76	23.65	6.3	179100	54	53.1	178	0
77	23.65	6.3	179390	55	54	178	0



# TEST CASE 99

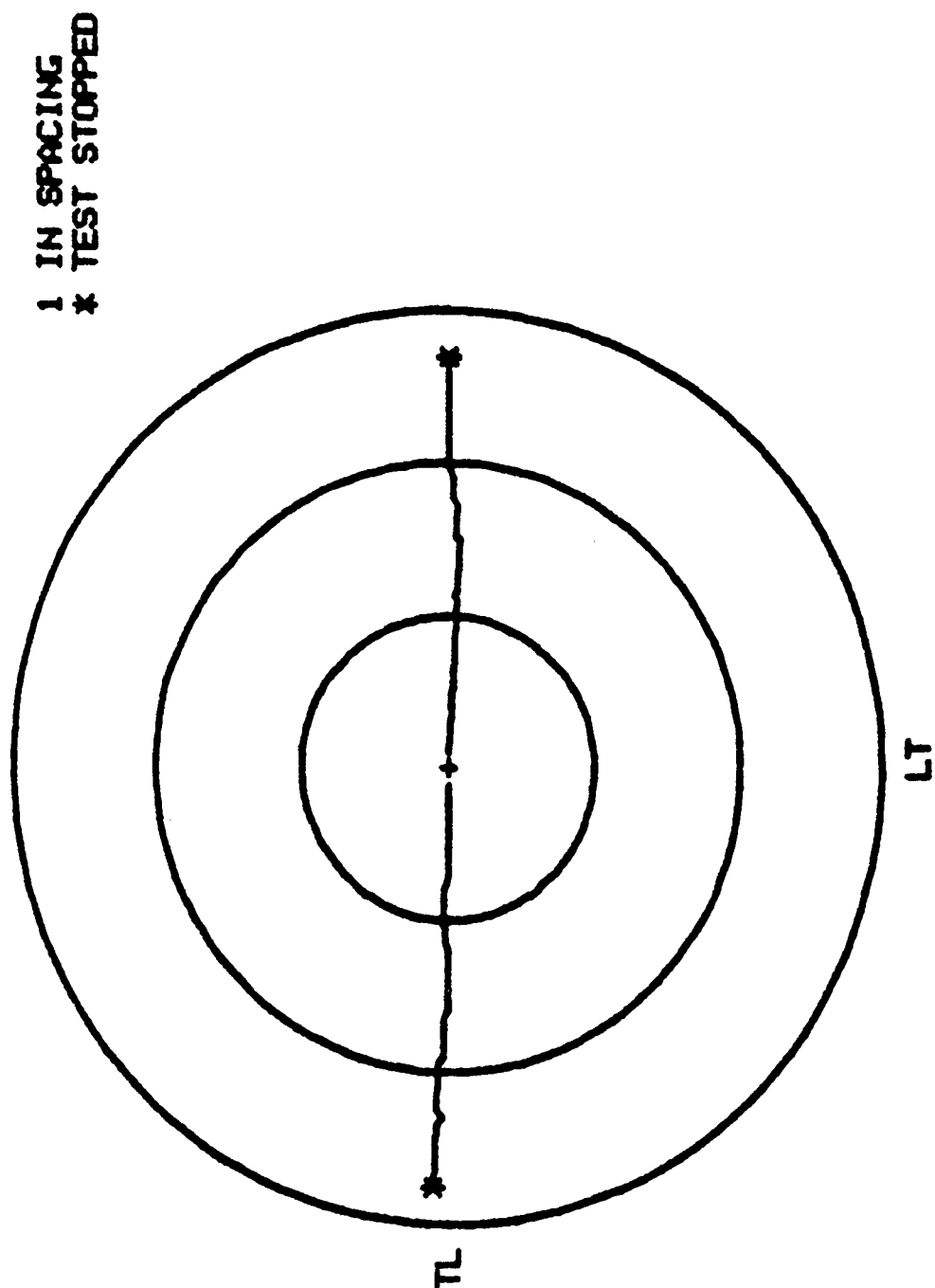
E 00 SPECIMEN 7-114





SPECIMEN 7-114

TEST CASE 99



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 103 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-25 FLAW TYPE - 7

TEMP = 75 F REL HUM = 45 % 01-10-78

B = .171 IN R(L) = .1 R(T) = .1

FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = .5  
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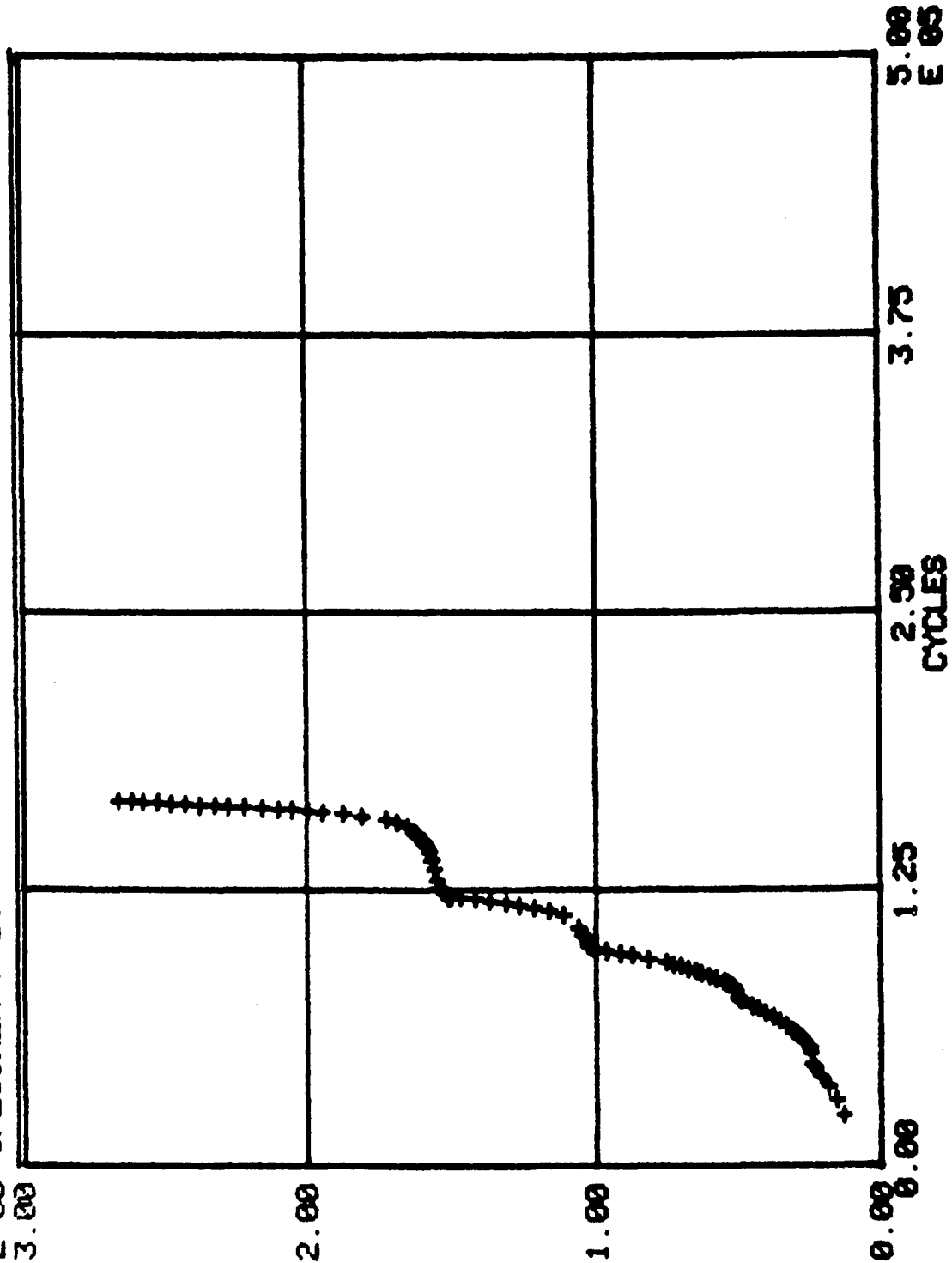
Overload Ratio = 2.0

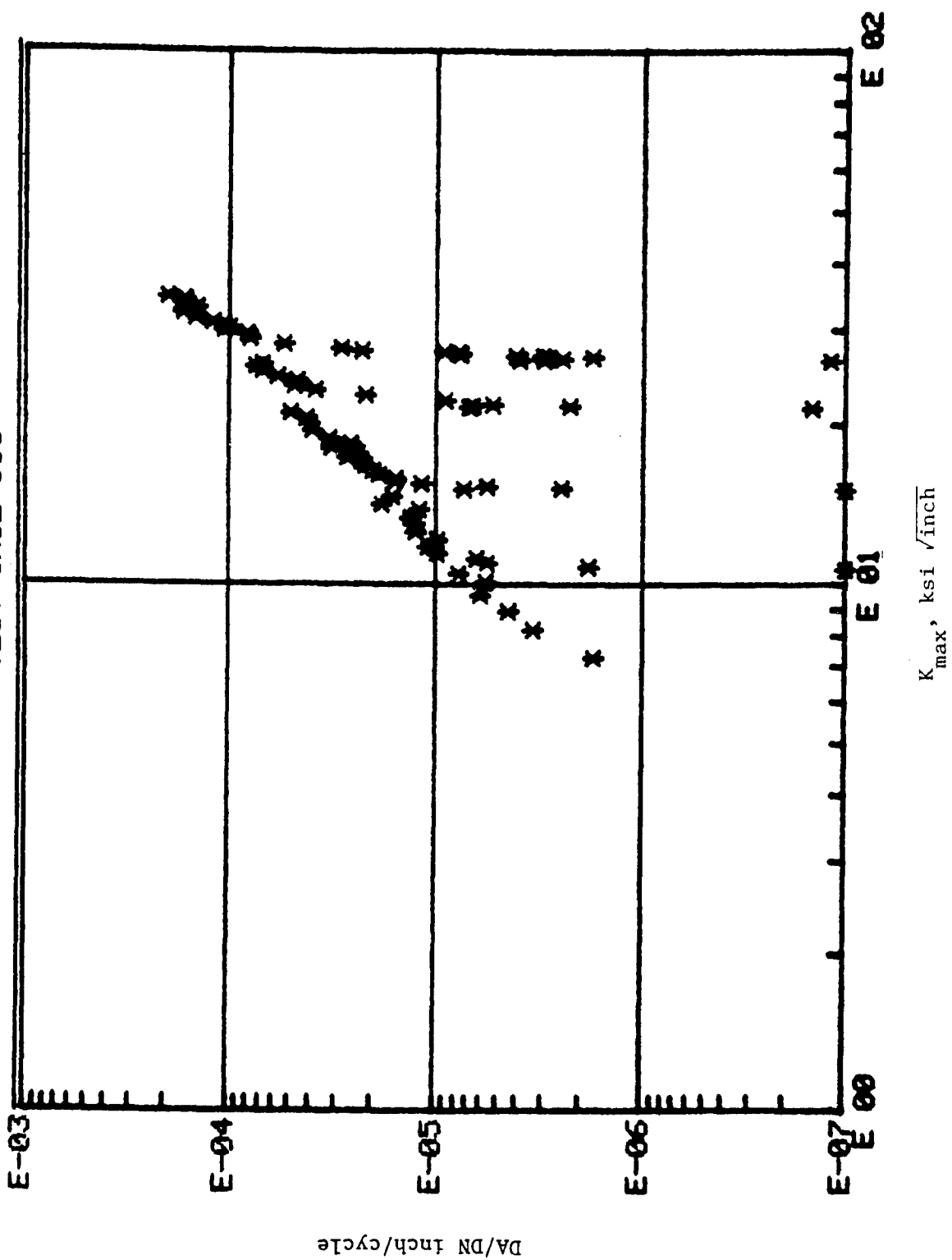
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	26.76	18.09	0	1.9	2	162	0
2	26.76	18.09	23170	2.5	3	180	-2
3	26.76	18.09	30550	3	3.5	180	-2
4	26.76	18.09	36730	3.5	4.1	180	-3
5	26.76	18.09	40830	4	4.6	180	-3
6	26.76	18.09	45180	4.5	5.1	180	-3
7	26.76	18.09	46470	4.7	5.3	180	-3
8	26.76	18.09	+1	4.7	5.3	180	-3
9	26.76	18.09	51470	4.8	5.4	180	-3
10	26.76	18.09	54200	4.9	5.5	180	-3
11	26.76	18.09	56840	5.2	5.8	180	-3
12	26.76	18.09	58410	5.4	6	180	-2
13	26.76	18.09	60190	5.7	6.4	180	-3
14	26.76	18.09	61560	6	6.7	180	-3
15	26.76	18.09	63850	6.5	7.1	180	-3
16	26.76	18.09	65850	7	7.6	180	-3
17	26.76	18.09	67610	7.5	8	179	-3
18	26.76	18.09	69680	8	8.6	179	-3
19	26.76	18.09	71550	8.5	9	179	-3
20	26.76	18.09	73060	9	9.6	179	-3
21	26.76	18.09	75210	9.7	10.3	178	-3
22	26.76	18.09	+1	9.7	10.3	178	-3
23	26.76	18.09	75780	9.8	10.4	178	-3
24	26.76	18.09	76460	9.9	10.5	178	-3
25	26.76	18.09	79490	10	10.7	178	-3
26	26.76	18.09	81690	10.3	10.9	178	-3
27	26.76	18.09	82760	10.5	11.2	178	-3
28	26.76	18.09	83390	10.8	11.3	178	-3
29	26.76	18.09	84030	11	11.5	178	-3
30	26.76	18.09	85500	11.6	12	178	-3
31	26.76	18.09	86620	12	12.5	178	-3
32	26.76	18.09	87980	12.6	13	178	-3
33	26.76	18.09	88750	13	13.4	178	-3
34	26.76	18.09	89770	13.5	14	178	-3
35	26.76	18.09	90710	14	14.4	178	-3
36	26.76	18.09	91570	14.5	15	178	-3
37	26.76	18.09	92550	15	15.5	178	-3
38	26.76	18.09	94300	16.1	16.7	178	-3
39	26.76	18.09	95760	17.2	17.9	177	-3
40	26.76	18.09	96750	18	18.7	177	-3
41	26.76	18.09	97880	19	19.6	177	-3
42	26.76	18.09	98630	19.8	20.3	177	-3
43	26.76	18.09	+1	19.9	20.4	177	-3
44	26.76	18.09	99580	20.1	20.8	177	-3
45	26.76	18.09	101030	20.3	21	177	-3
46	26.76	18.09	104350	20.5	21.1	177	-3
47	26.76	18.09	105490	20.7	21.2	177	-3
48	26.76	18.09	108310	21	21.5	177	-3
49	26.76	18.09	113800	22	22.5	178	-3
50	26.76	18.09	116180	23	23.6	178	-3

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	26.76	18.09	117490	24	24.6	178	-3
52	26.76	18.09	118580	25	25.7	178	-4
53	26.76	18.09	119540	26	26.5	178	-4
54	26.76	18.09	120490	27	27.7	178	-4
55	26.76	18.09	121290	28	28.9	179	-4
56	26.76	18.09	121970	29	29.9	179	-4
57	26.76	18.09	122440	29.8	30.4	179	-4
58	26.76	18.09	+1	30.1	30.5	179	-4
59	26.76	18.09	123860	30.3	30.9	179	-4
60	26.76	18.09	126380	30.5	31.1	179	-4
61	26.76	18.09	129710	30.8	31.2	179	-4
62	26.76	18.09	134810	31	31.5	179	-4
63	26.76	18.09	139870	31	31.8	179	-4
64	26.76	18.09	142540	31.2	32	178	-3
65	26.76	18.09	145010	31.3	32.2	178	-3
66	26.76	18.09	147420	31.5	32.4	178	-3
67	26.76	18.09	149730	31.8	32.8	178	-3
68	26.76	18.09	151000	32	33	178	-3
69	26.76	18.09	154270	32.2	34	178	-3
70	26.76	18.09	155790	32.6	35	178	-2
71	26.76	18.09	157100	33	36.1	178	-2
72	26.76	18.09	158620	34	38.4	178	-2
73	26.76	18.09	159440	35	40	177	-2
74	26.76	18.09	160300	36	41.8	177	-1
75	26.76	18.09	160800	37	42.9	177	-1
76	26.76	18.09	161350	38	44.1	177	-1
77	26.76	18.09	161800	39	45	177	-1
78	26.76	18.09	162260	40	46.2	177	-1
79	26.76	18.09	162730	41	47.9	177	-1
80	26.76	18.09	163100	42	49	177	-1
81	26.76	18.09	163400	43	50	177	-1
82	26.76	18.09	163690	44	50.9	177	-1
83	26.76	18.09	164060	45	52	177	-1
84	26.76	18.09	164370	46	53	177	-1
85	26.76	18.09	164670	47	54	177	-1
86	26.76	18.09	164980	48	55	177	-1
87	26.76	18.09	165240	49	55.7	177	-1
88	26.76	18.09	165480	50	56.6	177	-1

# TEST CASE 103

E 00 SPECIMEN 7-25



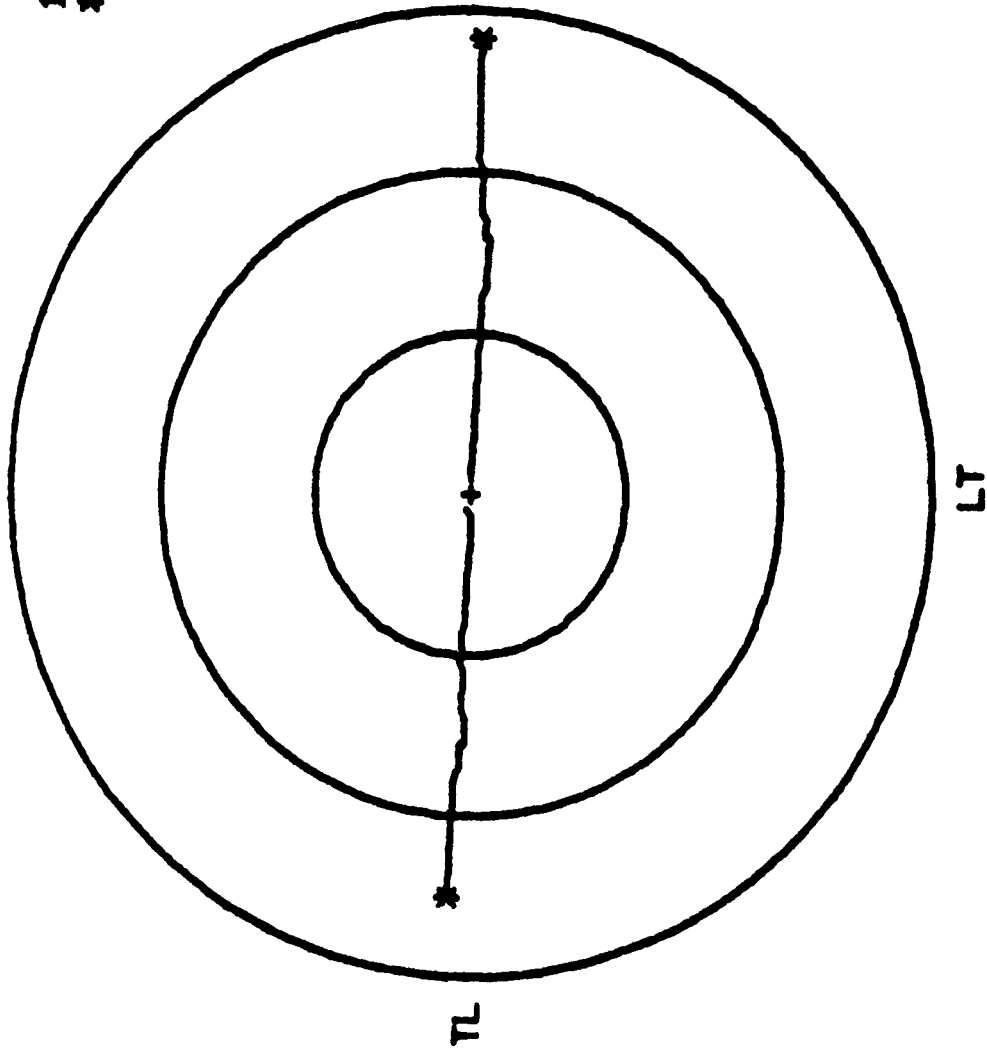




SPECIMEN 7-25

TEST CASE 103

1 IN SPACING  
\* TEST STOPPED

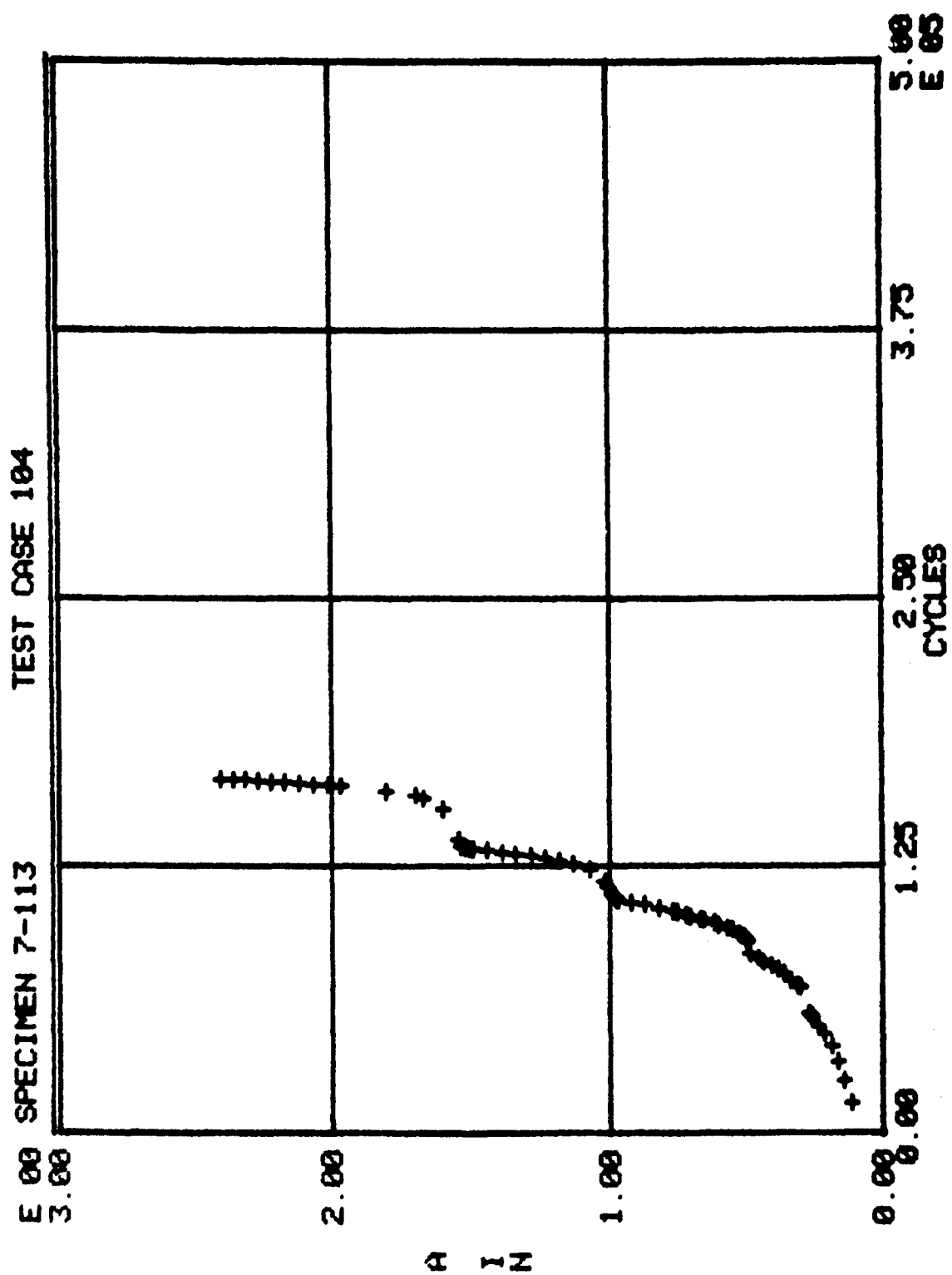


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CRACK GROWTH TEST OF 7075-T7 TEST CASE 104 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-113 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 55 % 01-13-78  
B = .18 IN R(L) = .1 R(T) = .1  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

Overload Ratio = 2.0

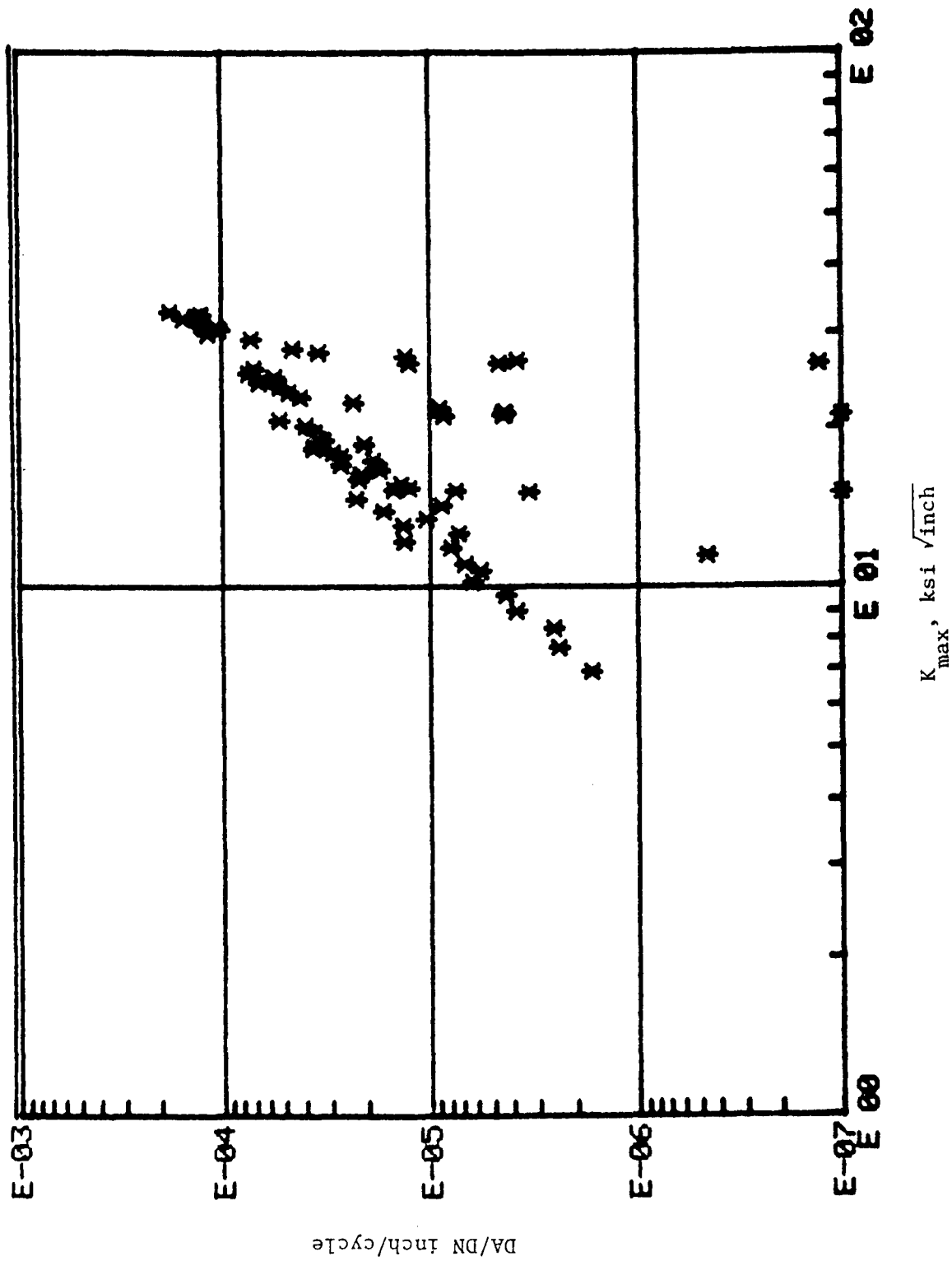
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	26.76	18.09	0	2	1.8	180	0
2	26.76	18.09	14880	2.5	2.3	180	0
3	26.76	18.09	25380	3	2.8	180	0
4	26.76	18.09	34250	3.5	3.2	180	0
5	26.76	18.09	41410	4	3.8	180	0
6	26.76	18.09	47190	4.5	4.3	180	0
7	26.76	18.09	51180	5	4.8	180	0
8	26.76	18.09	55090	5.5	5.2	179	-1
9	26.76	18.09	56550	5.7	5.4	178	-1
10	26.76	18.09	+1	5.7	5.4	178	-1
11	26.76	18.09	69000	6.3	6.1	177	-2
12	26.76	18.09	69940	6.5	6.2	177	-2
13	26.76	18.09	72000	7	6.8	177	-2
14	26.76	18.09	75100	7.5	7.2	177	-3
15	26.76	18.09	77150	8	7.8	177	-3
16	26.76	18.09	79060	8.5	8.1	177	-3
17	26.76	18.09	81010	9	8.9	177	-3
18	26.76	18.09	82990	9.5	9.1	177	-3
19	26.76	18.09	84440	10	9.9	177	-3
20	26.76	18.09	+1	10	9.9	177	-3
21	26.76	18.09	90000	10.2	10	177	-3
22	26.76	18.09	91500	10.4	10	177	-3
23	26.76	18.09	92500	10.6	10.1	177	-3
24	26.76	18.09	93000	10.8	10.2	177	-3
25	26.76	18.09	93800	11	10.4	177	-3
26	26.76	18.09	95800	11.6	10.9	177	-3
27	26.76	18.09	96600	12	11.2	177	-4
28	26.76	18.09	98000	12.5	11.9	176	-4
29	26.76	18.09	99000	13	12.1	176	-4
30	26.76	18.09	100300	13.5	13	176	-4
31	26.76	18.09	101100	14	13.1	176	-4
32	26.76	18.09	102400	14.5	14	176	-4
33	26.76	18.09	103000	15	14.2	176	-4
34	26.76	18.09	103900	15.5	15	175	-4
35	26.76	18.09	104500	16	15	175	-4
36	26.76	18.09	106100	17	16.1	175	-5
37	26.76	18.09	107500	18	17.1	176	-5
38	26.76	18.09	108700	19	18	175	-5
39	26.76	18.09	109650	20	19	175	-5
40	26.76	18.09	+1	20	19	175	-5
41	26.76	18.09	110230	20.2	19	175	-5
42	26.76	18.09	111400	20.4	19.2	175	-5
43	26.76	18.09	113100	20.6	19.3	175	-5
44	26.76	18.09	116000	20.8	19.6	175	-5
45	26.76	18.09	118300	21	19.8	176	-5
46	26.76	18.09	124200	22	20.9	176	-5
47	26.76	18.09	126800	23	22.3	176	-4
48	26.76	18.09	128000	24	23.3	176	-5
49	26.76	18.09	129100	25	24.4	176	-5
50	26.76	18.09	130100	26	25.5	176	-5

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	26.76	18.09	130900	27	26.6	176	-5
52	26.76	18.09	131800	28	27.6	175	-5
53	26.76	18.09	132550	29	28.8	176	-5
54	26.76	18.09	133300	30	29.9	175	-6
55	26.76	18.09	+1	30.2	30.1	175	-6
56	26.76	18.09	134000	30.6	30.4	175	-6
57	26.76	18.09	134800	30.8	30.6	175	-6
58	26.76	18.09	137500	31	30.9	176	-6
59	26.76	18.09	152020	32	32.1	176	-4
60	26.76	18.09	157380	32.7	34.2	176	-4
61	26.76	18.09	158190	33	35	177	-4
62	26.76	18.09	160500	34	38.2	177	-4
63	26.76	18.09	162770	36.1	42.6	177	-3
64	26.76	18.09	163180	37	43.6	178	-3
65	26.76	18.09	163690	38	44.7	178	-2
66	26.76	18.09	164190	39	45.8	178	-2
67	26.76	18.09	164630	40	47	178	-2
68	26.76	18.09	164990	41	47.8	179	-2
69	26.76	18.09	165300	42	48.7	179	-2
70	26.76	18.09	165660	43	49.6	179	-2
71	26.76	18.09	166000	44	50.3	179	-2
72	26.76	18.09	166240	45	51	179	-2



SPECIMEN 7-113

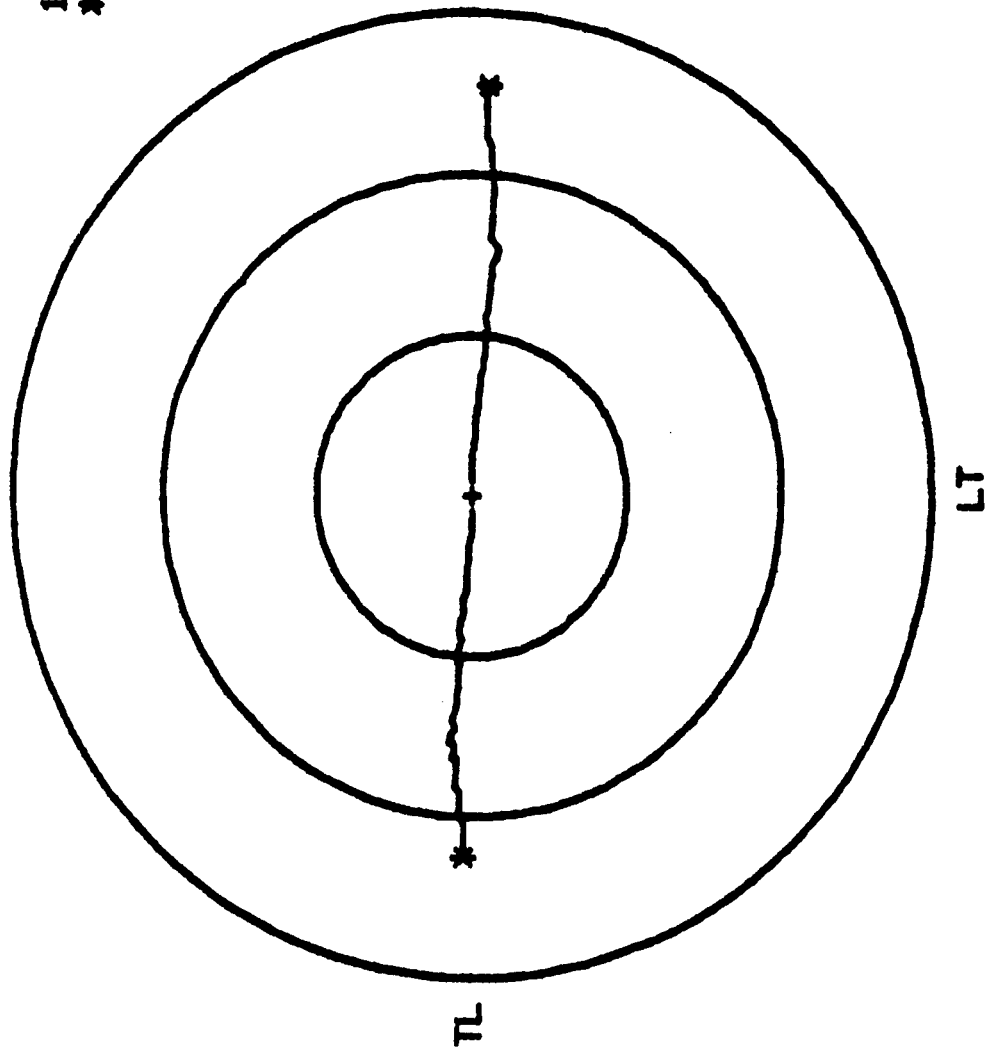
TEST CASE 104



SPECIMEN 7-113

TEST CASE 104

1 IN SPACING  
\* TEST STOPPED



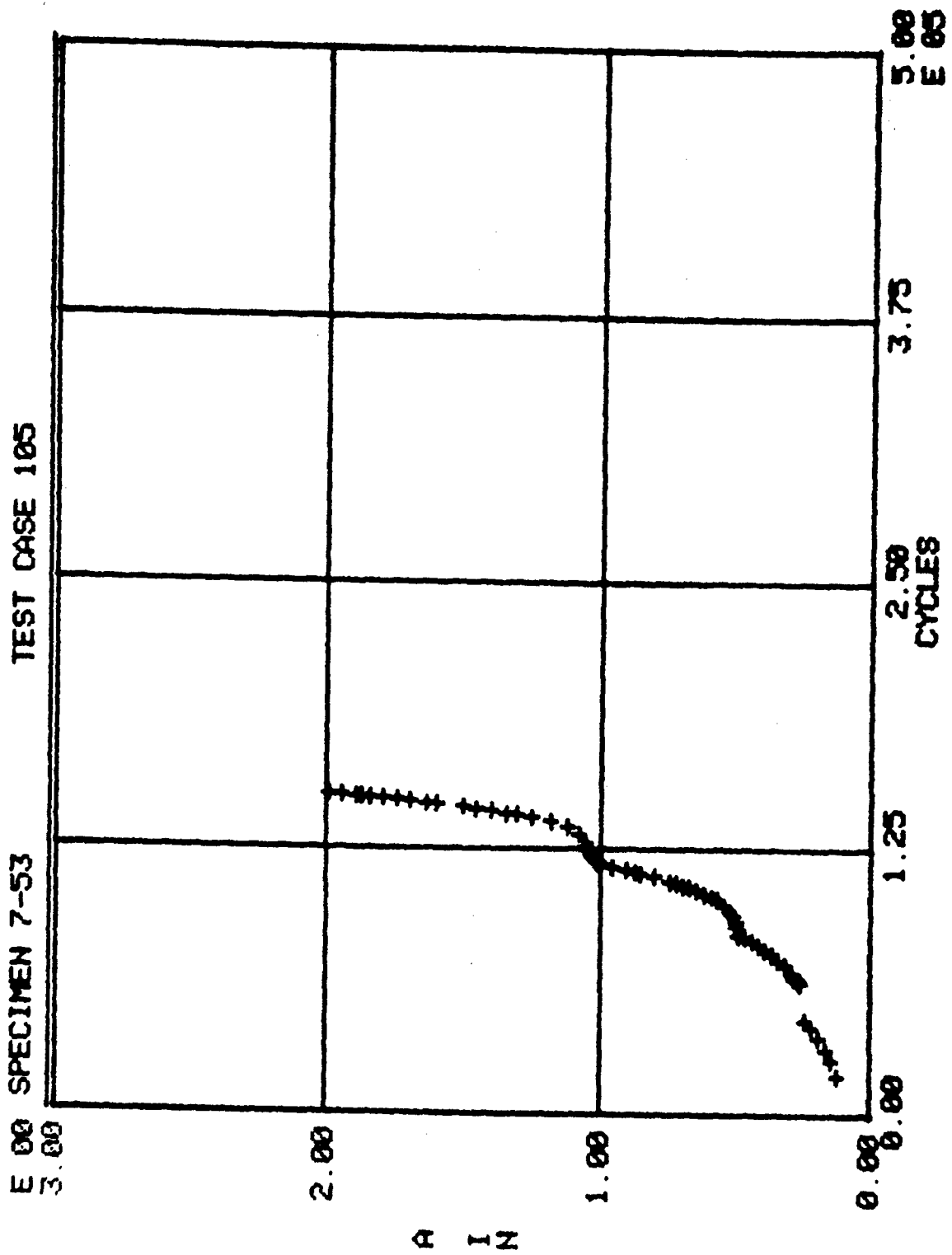
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CRACK GROWTH TEST OF 7075-T7 TEST CASE 105 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-53 FLAW TYPE - I  
TEMP = 75 F REL HUM = 55 % 4-8-78  
B = .176 IN R(1) = .1 R(2) = .1  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
-----

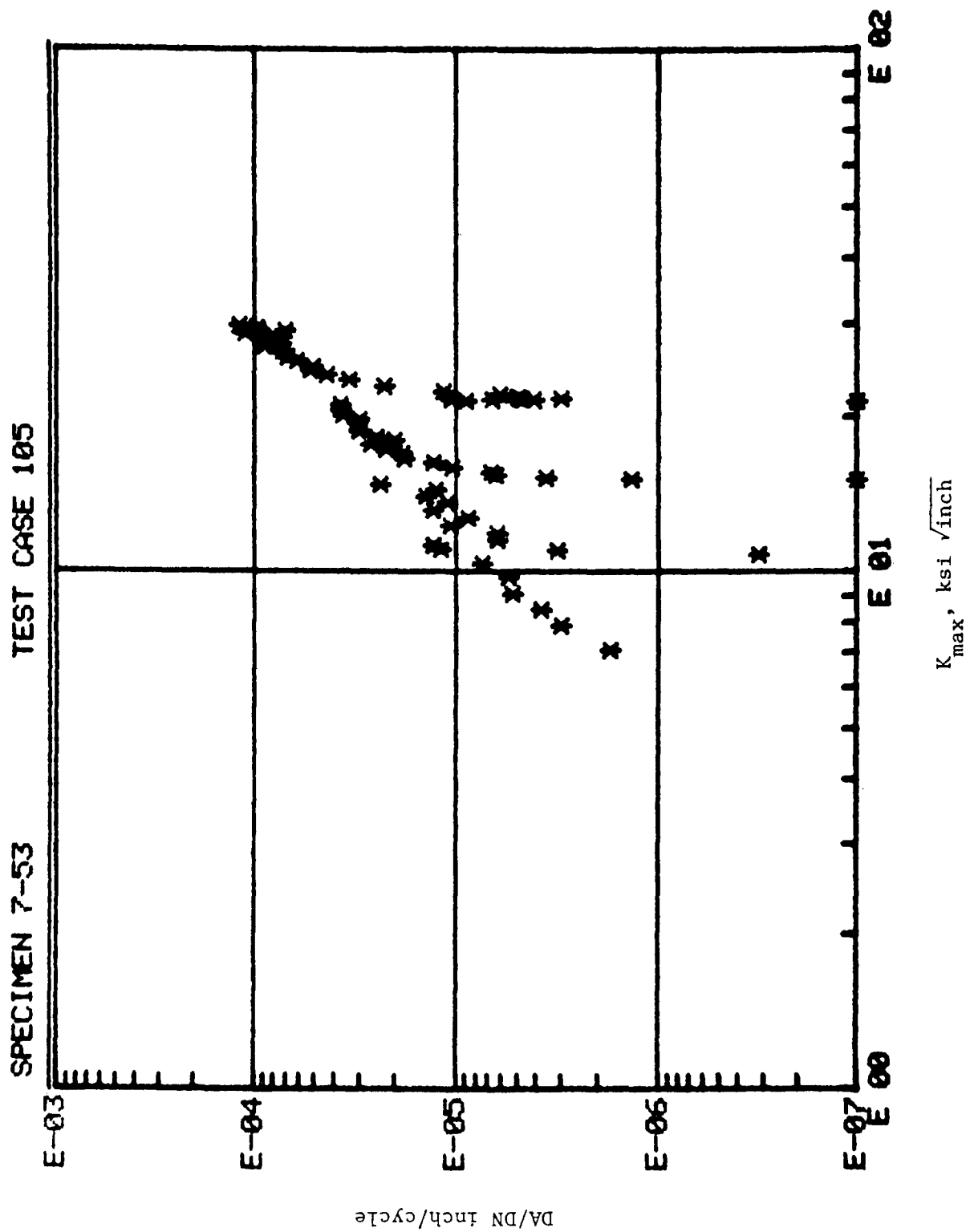
Overload Ratio = 2.0



REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	20.54	-5.49	0	1.8	2	180	-2
2	20.54	-5.49	18930	2.5	2.6	180	-1
3	20.54	-5.49	26380	3	3	180	0
4	20.54	-5.49	31670	3.5	3.3	180	0
5	20.54	-5.49	36880	4	3.9	180	0
6	20.54	-5.49	42330	4.6	4.5	180	0
7	20.54	-5.49	45020	5	4.9	180	0
8	20.54	-5.49	+1	5	4.9	180	0
9	20.54	-5.49	62630	5.4	5.3	180	0
10	20.54	-5.49	64220	5.5	5.4	180	0
11	20.54	-5.49	64640	5.6	5.5	180	0
12	20.54	-5.49	65610	5.8	5.8	180	0
13	20.54	-5.49	67220	6	6	180	0
14	20.54	-5.49	71250	6.5	6.5	180	0
15	20.54	-5.49	73620	7	7	180	0
16	20.54	-5.49	76490	7.5	7.5	180	0
17	20.54	-5.49	78430	8	8	180	0
18	20.54	-5.49	80910	8.5	8.6	180	0
19	20.54	-5.49	82580	9	9	180	0
20	20.54	-5.49	84490	9.5	9.5	180	0
21	20.54	-5.49	85550	10	10	180	0
22	20.54	-5.49	+1	10	10	180	0
23	20.54	-5.49	89080	10.2	10.1	180	-1
24	20.54	-5.49	91720	10.3	10.1	180	-1
25	20.54	-5.49	94530	10.5	10.3	180	-1
26	20.54	-5.49	96500	10.7	10.6	180	-1
27	20.54	-5.49	99100	11	11	180	-1
28	20.54	-5.49	101970	11.6	11.6	180	-1
29	20.54	-5.49	103320	12	11.9	180	-1
30	20.54	-5.49	104860	12.5	12.5	180	-1
31	20.54	-5.49	106480	13	13.2	180	-1
32	20.54	-5.49	107610	13.5	13.7	180	-1
33	20.54	-5.49	108560	14	14.2	180	-1
34	20.54	-5.49	109810	14.5	14.7	180	-1
35	20.54	-5.49	110620	14.9	15.1	180	-1
36	20.54	-5.49	112540	16	16.3	180	-1
37	20.54	-5.49	114250	17	17.4	179	-1
38	20.54	-5.49	114750	17.3	17.7	179	-1
39	20.54	-5.49	115720	18	18.4	179	-1
40	20.54	-5.49	117070	19	19.4	179	-1
41	20.54	-5.49	118210	19.9	20.2	178	-1
42	20.54	-5.49	+1	20	20.2	178	-1
43	20.54	-5.49	119340	20.1	20.4	178	-1
44	20.54	-5.49	120180	20.2	20.6	178	-1
45	20.54	-5.49	120650	20.2	20.8	178	-1
46	20.54	-5.49	121410	20.3	20.9	178	-1
47	20.54	-5.49	122020	20.4	20.9	178	-1
48	20.54	-5.49	122550	20.4	21	178	-1
49	20.54	-5.49	123070	20.4	21.1	178	-1
50	20.54	-5.49	124730	20.6	21.1	178	-1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	20.54	-5.49	125760	20.8	21.1	178	-1
52	20.54	-5.49	128280	21	21.4	179	-1
53	20.54	-5.49	132000	21.3	22	179	-1
54	20.54	-5.49	135700	22	23	180	-1
55	20.54	-5.49	138240	23	24.3	179	-1
56	20.54	-5.49	140400	24.4	25.8	179	-1
57	20.54	-5.49	141600	25.3	27	179	-1
58	20.54	-5.49	142320	26	27.8	179	-1
59	20.54	-5.49	143400	27	29	179	-1
60	20.54	-5.49	144340	28	30.3	179	-2
61	20.54	-5.49	145840	29	31.2	179	-2
62	20.54	-5.49	146390	31	33.1	178	-2
63	20.54	-5.49	146810	31.8	33.8	178	-2
64	20.54	-5.49	147640	33	35	178	-2
65	20.54	-5.49	148170	34	35.9	178	-2
66	20.54	-5.49	148800	35	36.9	178	-2
67	20.54	-5.49	149230	36	37.8	178	-2
68	20.54	-5.49	149660	36.6	38.4	178	-2
69	20.54	-5.49	149870	37	38.8	178	-2
70	20.54	-5.49	150390	38	39.8	178	-2
71	20.54	-5.49	150810	39	40.8	178	-2

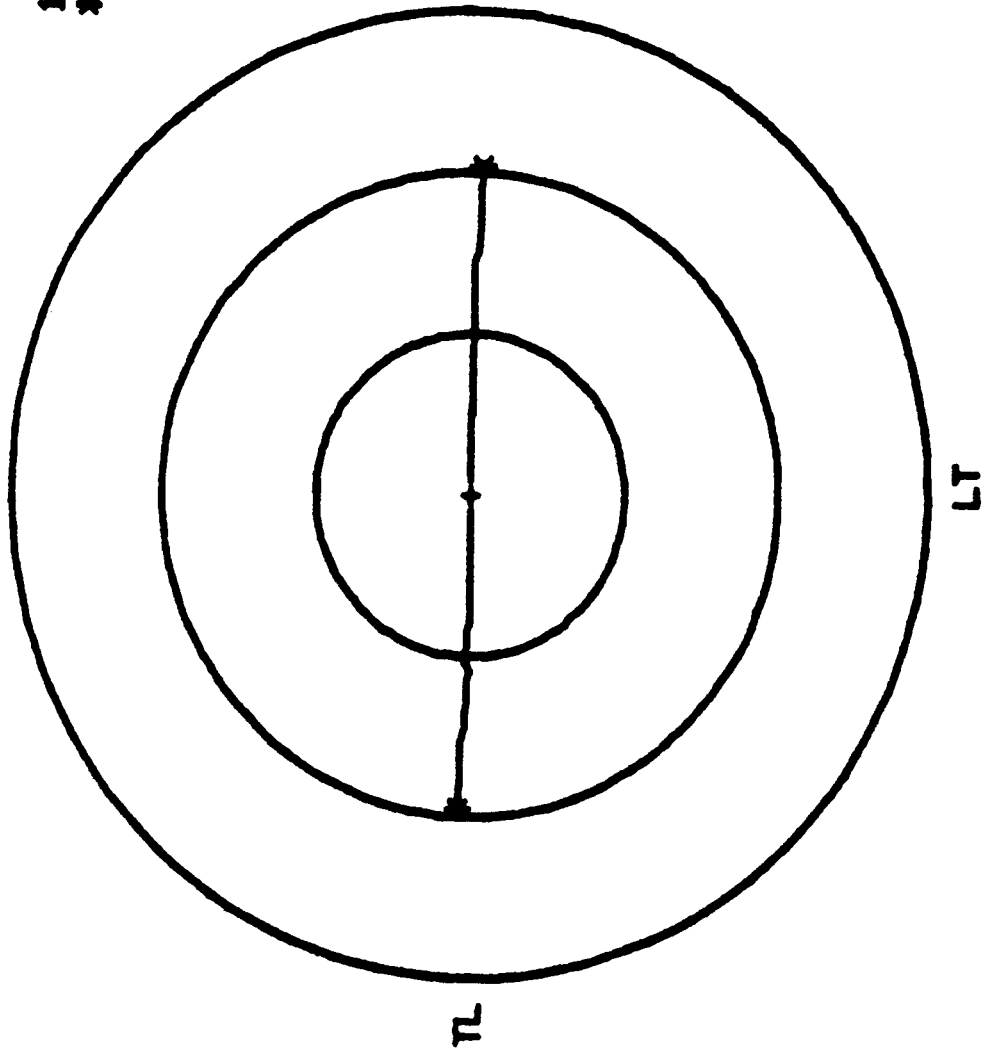




SPECIMEN 7-53

TEST CASE 105

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 114 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-102 FLAW TYPE - 1  
TEMP = 73 F REL HUM = 63 % 7-6-78  
B = .165 IN R(L) = .1 R(T) = .1  
FREQ = HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = 0  
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.....  
Spectrum Load (Truncated Spectrum)  
.....

REF #	P(L) KIPS	P(R) KIPS	TOTAL BLOCKS	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	59.12	15.75	0	5	5	177	2
2	59.12	15.75	3	5.5	6	177	0
3	59.12	15.75	6	5.7	6	177	0
4	59.12	15.75	10	6	6.3	177	0
5	59.12	15.75	15	6.2	6.9	177	0
6	59.12	15.75	20	6.7	7	177	0
7	59.12	15.75	25	7	7.4	177	0
8	59.12	15.75	30	7.4	8	177	0
9	59.12	15.75	35	8	8.3	177	0
10	59.12	15.75	40	8.4	8.9	177	0
11	59.12	15.75	45	8.9	9.2	177	0
12	59.12	15.75	50	9.3	9.8	177	0
13	59.12	15.75	55	9.9	10	177	0
14	59.12	15.75	60	10.2	10.5	177	0
15	59.12	15.75	65	10.9	11.1	177	0
16	59.12	15.75	70	11.5	11.9	177	0
17	59.12	15.75	75	11.8	12.3	177	0
18	59.12	15.75	80	12.2	12.9	178	0
19	59.12	15.75	85	12.9	13.2	178	0
20	59.12	15.75	90	13.3	13.9	178	0
21	59.12	15.75	95	13.9	14.2	178	0
22	59.12	15.75	100	14.2	14.9	178	0
23	59.12	15.75	105	14.9	15.4	178	0
24	59.12	15.75	110	15.4	16	178	0
25	59.12	15.75	115	16	16.5	178	0
26	59.12	15.75	120	16.5	17	178	0
27	59.12	15.75	125	17	17.6	178	0
28	59.12	15.75	130	17.6	18	178	0
29	59.12	15.75	135	18.2	18.8	178	0
30	59.12	15.75	140	18.9	19.4	178	0
31	59.12	15.75	145	19.5	20	179	0
32	59.12	15.75	150	20.2	20.7	179	0
33	59.12	15.75	155	21	21.4	179	0
34	59.12	15.75	160	21.5	22	179	1
35	59.12	15.75	165	22.2	22.9	179	0
36	59.12	15.75	170	23	23.6	179	0
37	59.12	15.75	175	23.6	24.2	179	0
38	59.12	15.75	180	24.4	25	179	1
39	59.12	15.75	185	25	25.8	179	1
40	59.12	15.75	190	26	26.6	179	1
41	59.12	15.75	195	26.8	27.1	179	1
42	59.12	15.75	200	27.6	28.1	179	0
43	59.12	15.75	205	28.6	29.1	179	0
44	59.12	15.75	210	29.6	30.1	179	0
45	59.12	15.75	215	30.7	31.1	179	1
46	59.12	15.75	220	31.9	32.3	179	1
47	59.12	15.75	225	33	33.2	179	1
48	59.12	15.75	230	34	34.4	179	1
49	59.12	15.75	235	35	35.6	179	1
50	59.12	15.75	240	36	36.7	179	1

REF #	P(L) KIPS	P(R) KIPS	TOTAL BLOCKS	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	59.12	15.75	245	37.2	38	178	1
52	59.12	15.75	250	38.4	39	178	0
57	59.12	15.75	254.8	39.6	40.2	178	0



# TEST CASE 114

E 00 SPECIMEN 7-102

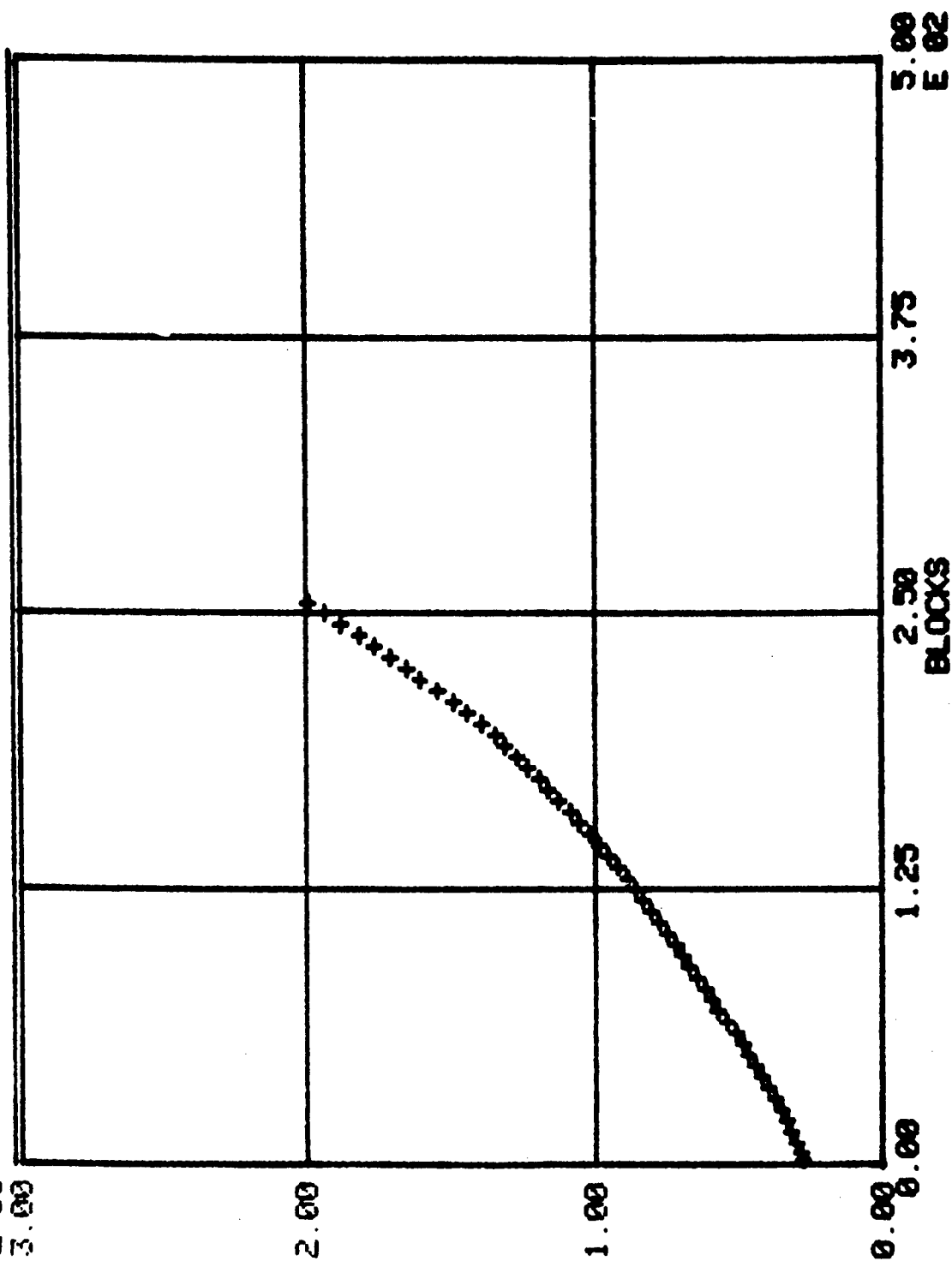
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2.00

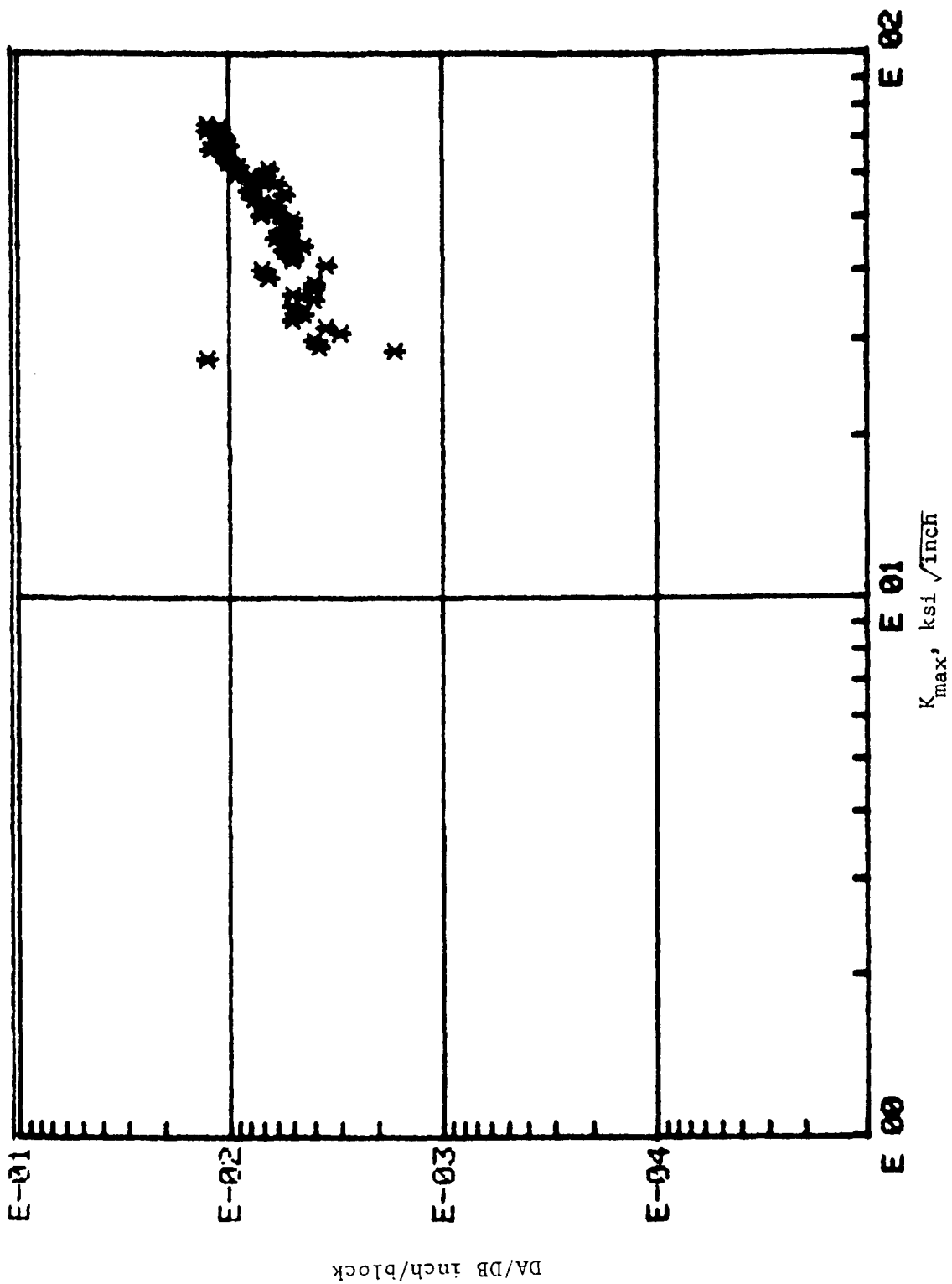
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0.00

A I N



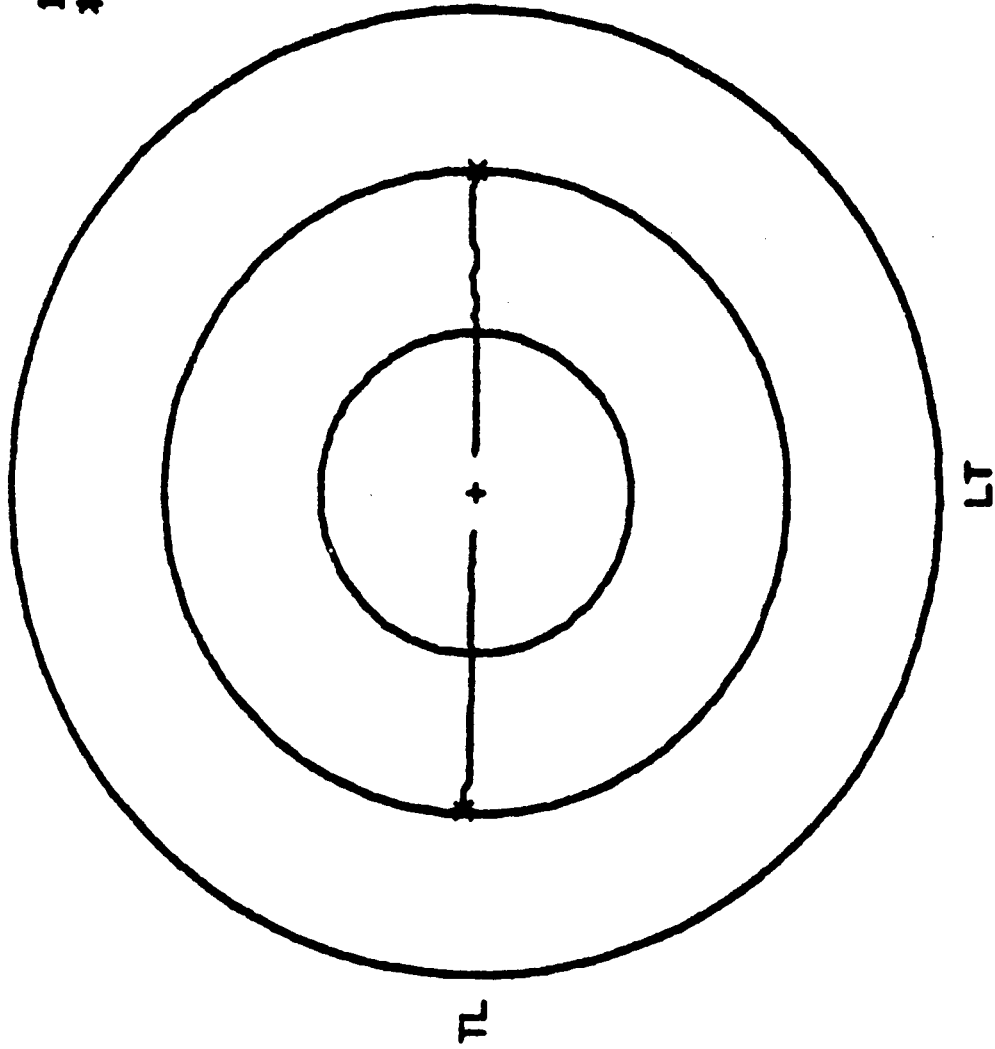
# SPECIMEN 7-182 TEST CASE 114



SPECIMEN 7-102

TEST CASE 114

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 115 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-90 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 55% 6-22-78  
B = .175 IN R(L) = .1 R(T) = .1  
FREQ = HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
-----

Spectrum Load (Truncated Spectrum)

REF #	P(L) KIPS	P(T) KIPS	TOTAL BLOCKS	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	51.33	-13.72	0	5	4.8	182	4
2	51.33	-13.72	3	5.3	5	181	4
3	51.33	-13.72	6	5.5	5.2	181	3
4	51.33	-13.72	10	5.8	5.5	181	3
5	51.33	-13.72	15	5.8	5.6	181	3
6	51.33	-13.72	20	6	5.8	181	3
7	51.33	-13.72	25	6	5.9	181	3
8	51.33	-13.72	30	6.2	6	181	3
9	51.33	-13.72	35	6.4	6.2	181	3
10	51.33	-13.72	40	6.7	6.4	181	3
11	51.33	-13.72	45	6.9	6.7	181	3
12	51.33	-13.72	50	7.1	6.9	181	3
13	51.33	-13.72	55	7.3	7.1	181	3
14	51.33	-13.72	60	7.6	7.5	181	3
15	51.33	-13.72	65	8	7.8	181	3
16	51.33	-13.72	70	8.2	8	181	4
17	51.33	-13.72	75	8.6	8.4	181	3
18	51.33	-13.72	80	8.9	8.7	181	3
19	51.33	-13.72	85	9	9	182	3
20	51.33	-13.72	90	9.2	9.2	182	3
21	51.33	-13.72	95	9.9	9.8	182	3
22	51.33	-13.72	100	10	10	182	3
23	51.33	-13.72	105	10.3	10.2	182	3
24	51.33	-13.72	110	10.7	10.6	182	3
25	51.33	-13.72	115	11	10.9	182	3
26	51.33	-13.72	120	11.2	11.2	181	3
27	51.33	-13.72	125	11.8	11.8	181	3
28	51.33	-13.72	130	12	12	181	3
29	51.33	-13.72	135	12.4	12.3	181	3
30	51.33	-13.72	140	12.9	12.8	181	3
31	51.33	-13.72	145	13.1	13.2	181	2
32	51.33	-13.72	150	13.6	13.6	181	2
33	51.33	-13.72	155	14	14	182	2
34	51.33	-13.72	160	14.4	14.4	181	2
35	51.33	-13.72	165	14.8	14.8	181	2
36	51.33	-13.72	170	15	15.1	181	2
37	51.33	-13.72	175	15.6	15.6	181	2
38	51.33	-13.72	180	16	16	181	2
39	51.33	-13.72	185	16.4	16.5	181	2
40	51.33	-13.72	190	16.9	16.9	181	2
41	51.33	-13.72	195	17.2	17.3	181	2
42	51.33	-13.72	200	17.8	17.9	181	2
43	51.33	-13.72	205	18.1	18.3	181	2
44	51.33	-13.72	210	18.6	18.8	181	2
45	51.33	-13.72	215	19	19	181	2
46	51.33	-13.72	220	19.5	19.1	181	2
47	51.33	-13.72	225	20	20.1	181	2
48	51.33	-13.72	230	20.5	20.8	181	2
49	51.33	-13.72	235	21	21.1	181	2
50	51.33	-13.72	240	21.5	21.8	181	2

REF #	P(L) KIPS	P(T) KIPS	TOTAL BLOCKS	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	51.33	-13.72	245	22	22.1	181	2
52	51.33	-13.72	250	22.5	22.7	181	2
53	51.33	-13.72	255	23	23	181	2
54	51.33	-13.72	260	23.4	23.4	181	2
55	51.33	-13.72	265	24	24	181	2
56	51.33	-13.72	270	24.5	24.7	181	2
57	51.33	-13.72	275	25	25.2	181	2
58	51.33	-13.72	280	25.8	25.9	181	2
59	51.33	-13.72	285	26.1	26.4	181	2
60	51.33	-13.72	290	26.8	27	181	2
61	51.33	-13.72	295	27.4	27.8	181	2
62	51.33	-13.72	300	28	28.3	181	2
63	51.33	-13.72	305	28.7	29	181	2
64	51.33	-13.72	310	29.4	29.7	181	2
65	51.33	-13.72	315	30	30.4	181	2
66	51.33	-13.72	320	30.5	31	181	2
67	51.33	-13.72	325	31.5	31.8	181	2
68	51.33	-13.72	330	32	32.2	181	2
69	51.33	-13.72	335	32.9	33	181	2
70	51.33	-13.72	340	33.5	34	181	2
71	51.33	-13.72	345	34.1	34.8	181	2
72	51.33	-13.72	350	35	35.2	181	1
73	51.33	-13.72	355	36	36.3	181	1
74	51.33	-13.72	360	36.9	37.3	181	1
75	51.33	-13.72	365	37.9	38.1	181	1
76	51.33	-13.72	370	38.6	39	181	1
77	51.33	-13.72	375	39.4	40	181	1
78	51.33	-13.72	376.3	39.7	40.3	181	1

# TEST CASE 115

E 00 SPECIMEN 7-90

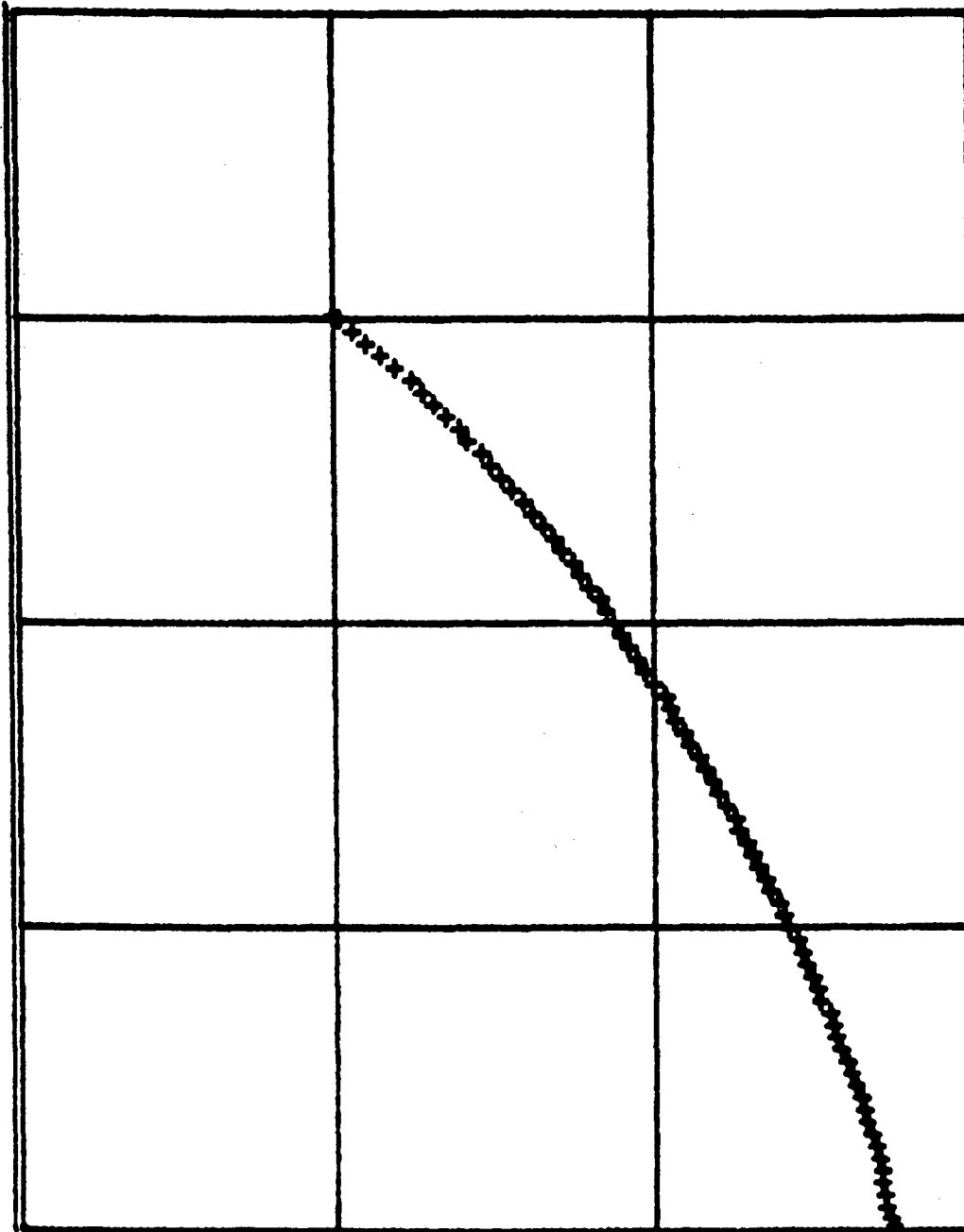
3.00

2.00

1.00

0.00

A I N



5.00  
E 02

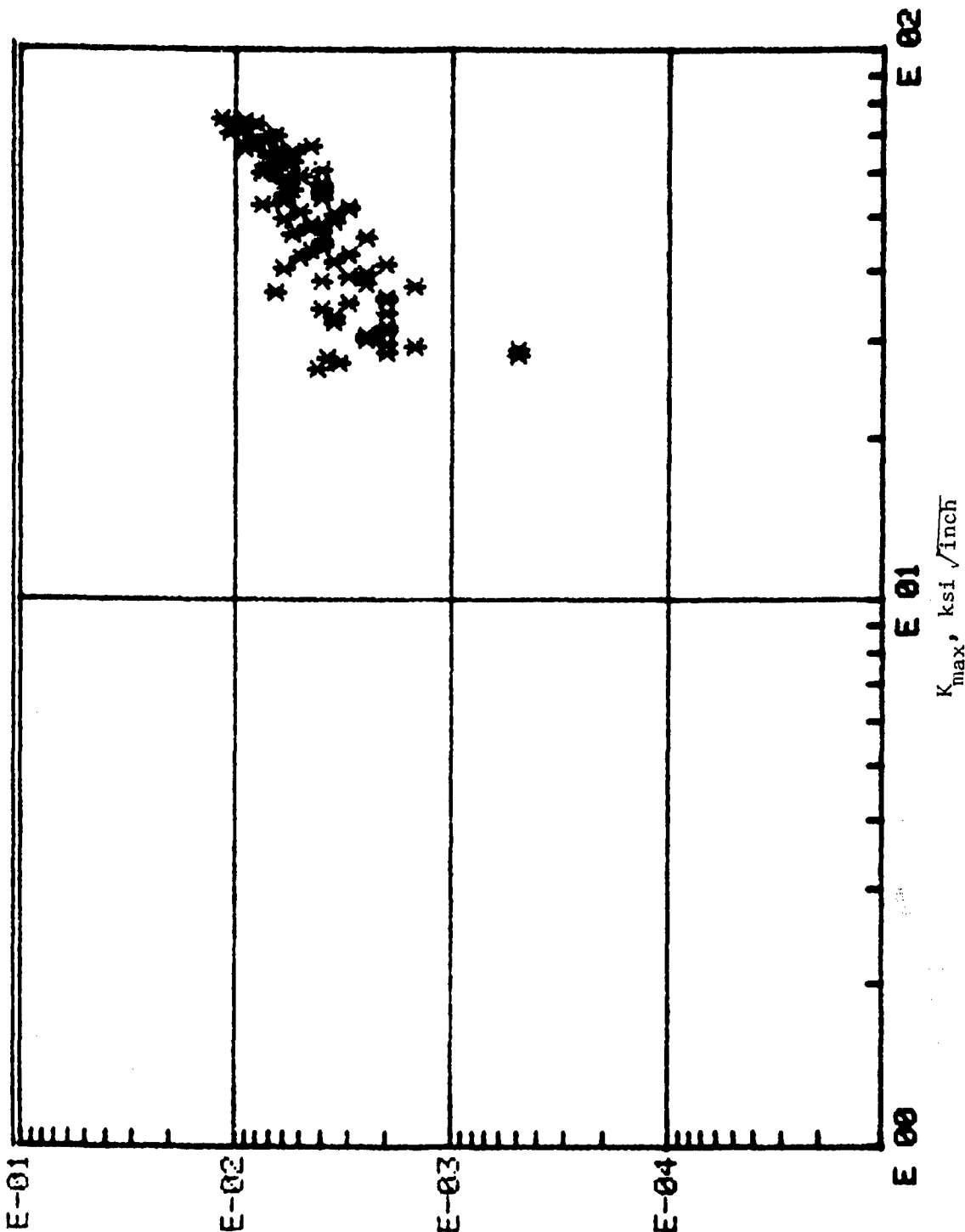
3.75

2.50  
BLOCKS

1.25

SPECIMEN 7-90 TEST CASE 115

E-01

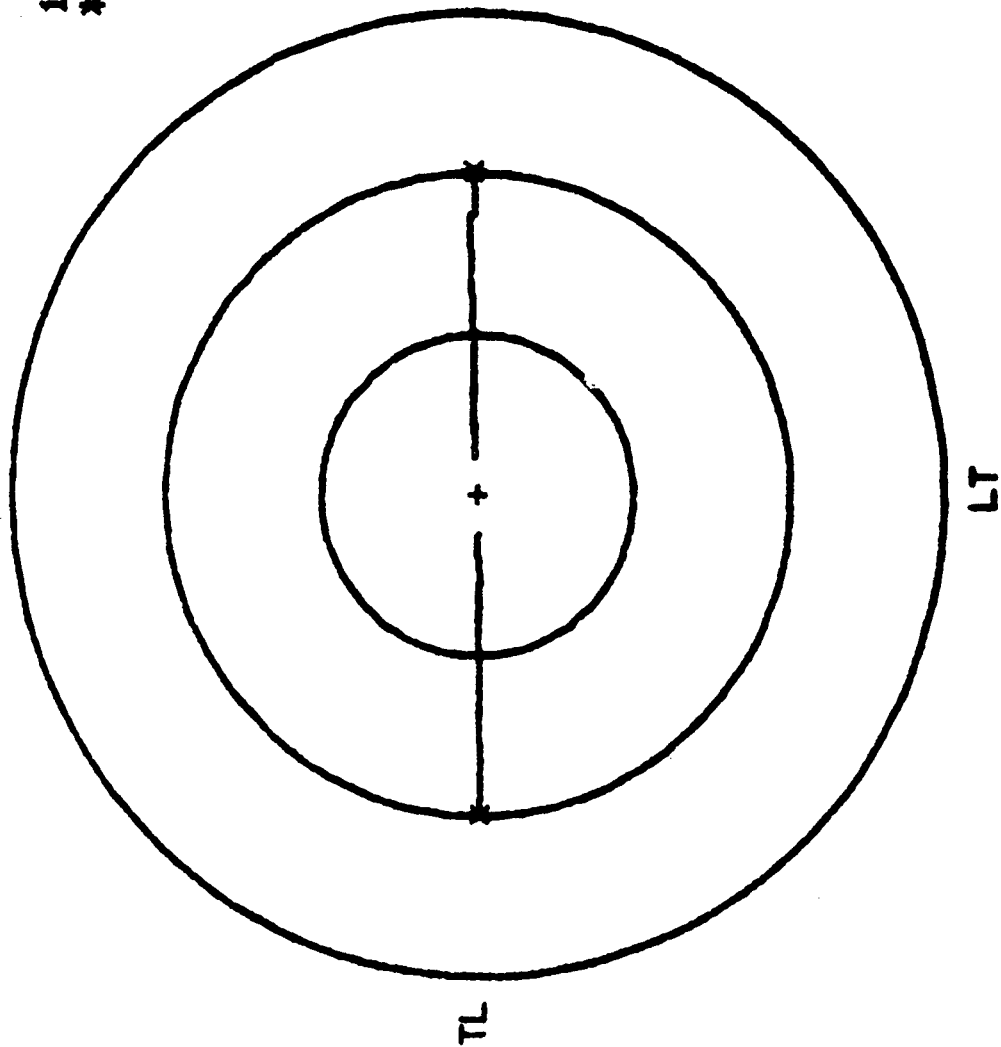




SPECIMEN 7-90

TEST CASE 115

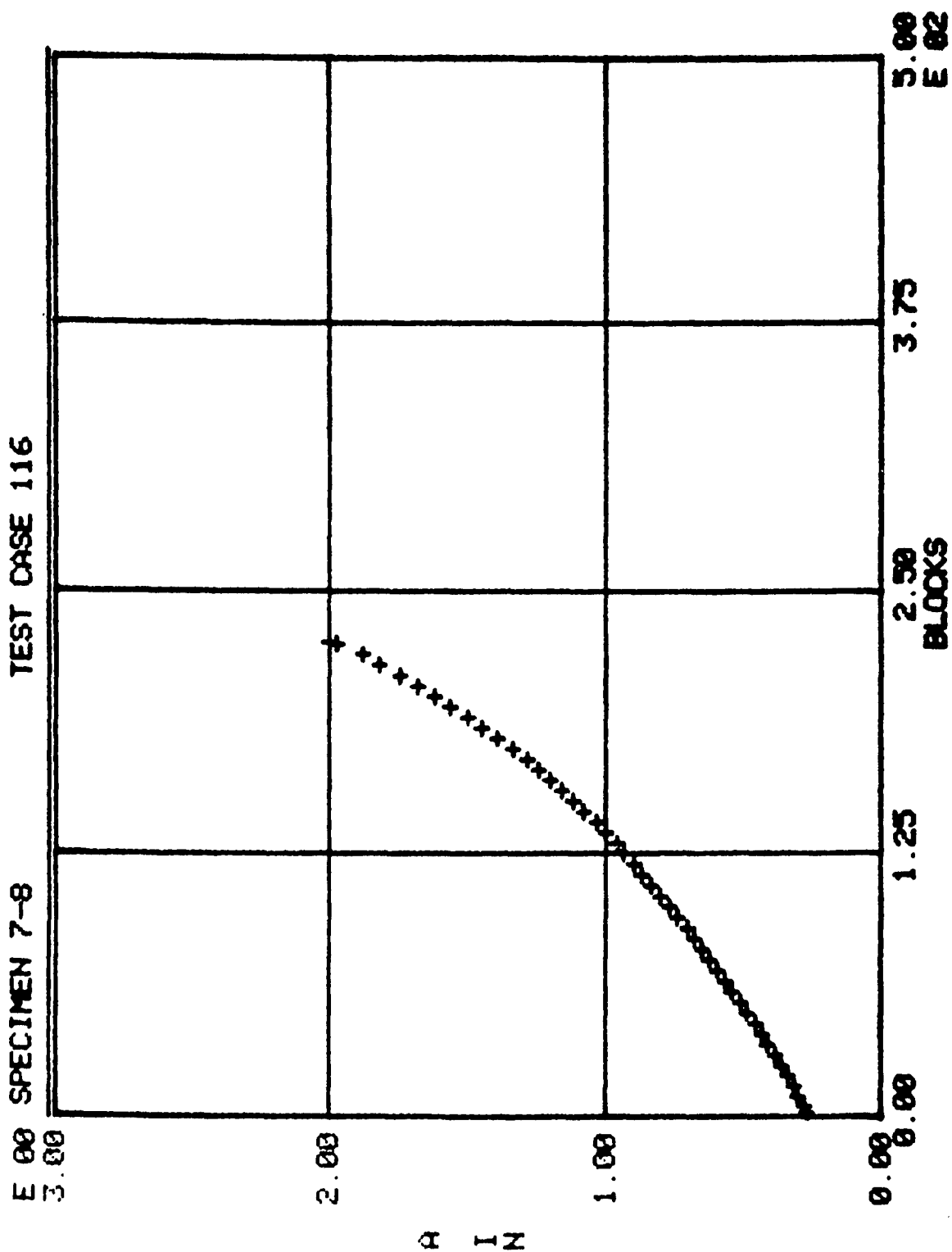
1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 116 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-8 FLAW TYPE - 1  
TEMP = 77 F REL HUM = 58 % 6-16-78  
B = .178 IN R(L) = .1 R(T) = .1  
FREQ = HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

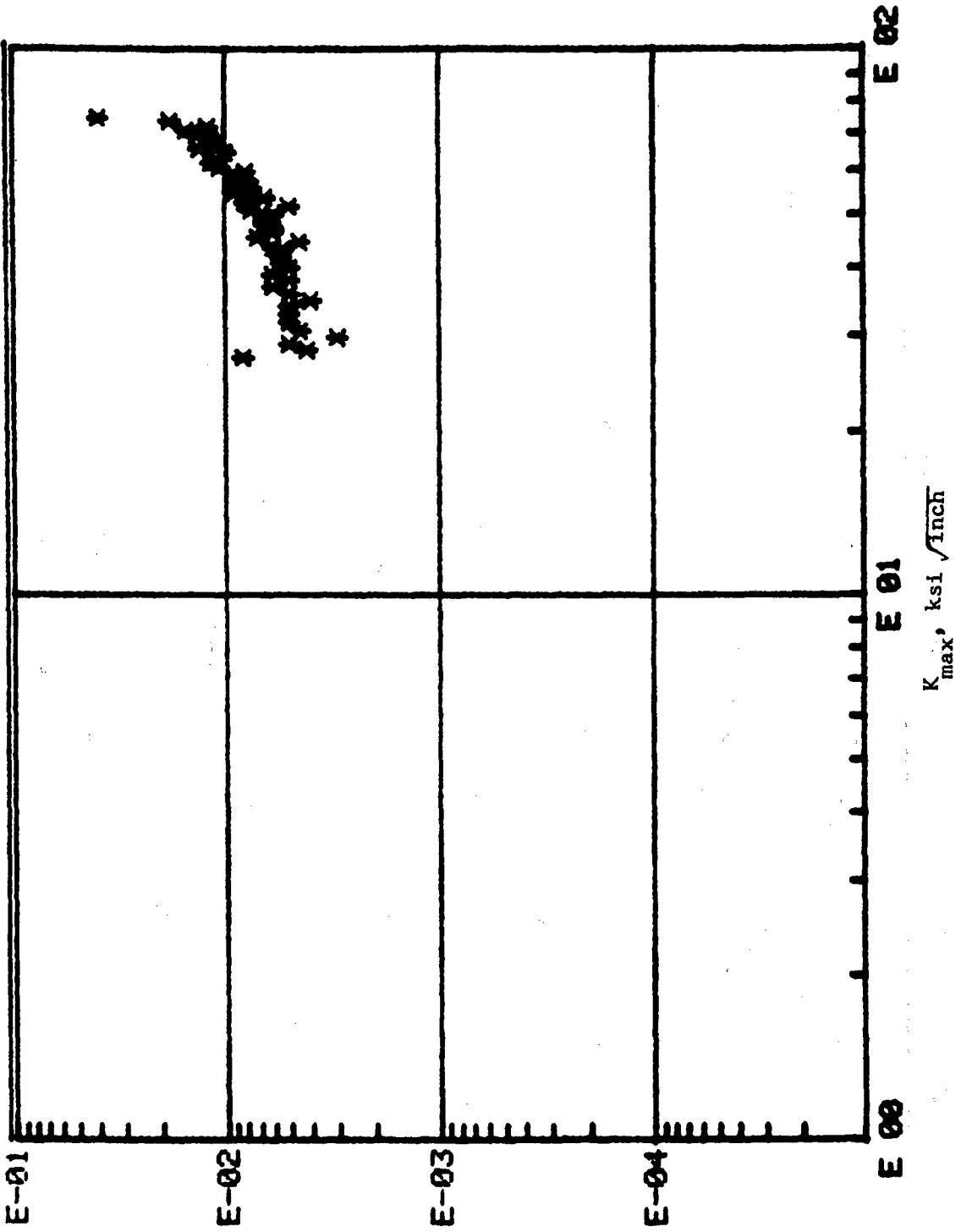
Spectrum Load (Truncated Spectrum) ..

REF #	P(L) KIPS	P(T) KIPS	TOTAL BLOCKS	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	66.9	45.2	0	5.1	4.9	182	0
2	66.9	45.2	3	5.7	5.3	182	0
3	66.9	45.2	6	5.9	5.6	182	0
4	66.9	45.2	10	6.3	6	182	0
5	66.9	45.2	15	6.7	6.2	182	0
6	66.9	45.2	20	6.8	7	182	0
7	66.9	45.2	25	7.6	7.2	182	0
8	66.9	45.2	30	8	7.8	182	0
9	66.9	45.2	35	8.6	8.2	182	0
10	66.9	45.2	40	8.9	8.7	182	0
11	66.9	45.2	45	9.5	9.1	182	0
12	66.9	45.2	50	10.1	9.7	182	0
13	66.9	45.2	55	10.6	10.2	182	0
14	66.9	45.2	60	11.2	10.8	182	0
15	66.9	45.2	65	11.7	11.3	182	0
16	66.9	45.2	70	12.2	11.9	182	0
17	66.9	45.2	75	12.8	12.4	182	1
18	66.9	45.2	80	13.3	13	182	1
19	66.9	45.2	85	14	13.5	182	1
20	66.9	45.2	90	14.4	14	182	1
21	66.9	45.2	95	15	14.8	182	1
22	66.9	45.2	100	15.8	15.2	182	1
23	66.9	45.2	105	16.3	15.9	182	1
24	66.9	45.2	110	17	16.5	182	1
25	66.9	45.2	115	17.6	17.2	182	1
26	66.9	45.2	120	18.2	17.8	182	1
27	66.9	45.2	125	19	18.5	182	0
28	66.9	45.2	130	19.5	19	182	0
29	66.9	45.2	135	20.2	19.9	182	0
30	66.9	45.2	140	20.8	20.6	182	1
31	66.9	45.2	145	21.8	21.4	182	1
32	66.9	45.2	150	22.6	22.1	181	1
33	66.9	45.2	155	23.4	23	181	1
34	66.9	45.2	160	24.2	23.8	181	1
35	66.9	45.2	165	25.1	24.7	181	1
36	66.9	45.2	170	26	25.4	181	1
37	66.9	45.2	175	27	26.5	181	1
38	66.9	45.2	180	28.1	27.7	181	1
39	66.9	45.2	185	29.3	28.7	181	1
40	66.9	45.2	190	30.3	29.7	181	0
41	66.9	45.2	195	31.6	31	181	0
42	66.9	45.2	200	32.9	32	182	1
43	66.9	45.2	205	34	33.2	182	0
44	66.9	45.2	210	35.3	34.6	182	1
45	66.9	45.2	215	36.9	36	182	1
46	66.9	45.2	220	37.9	37.4	182	1
47	66.9	45.2	225	39.9	39	182	1
48	66.9	45.2	225.7	40.4	39.6	182	1



SPECIMEN 7-8 TEST CASE 116

E-01

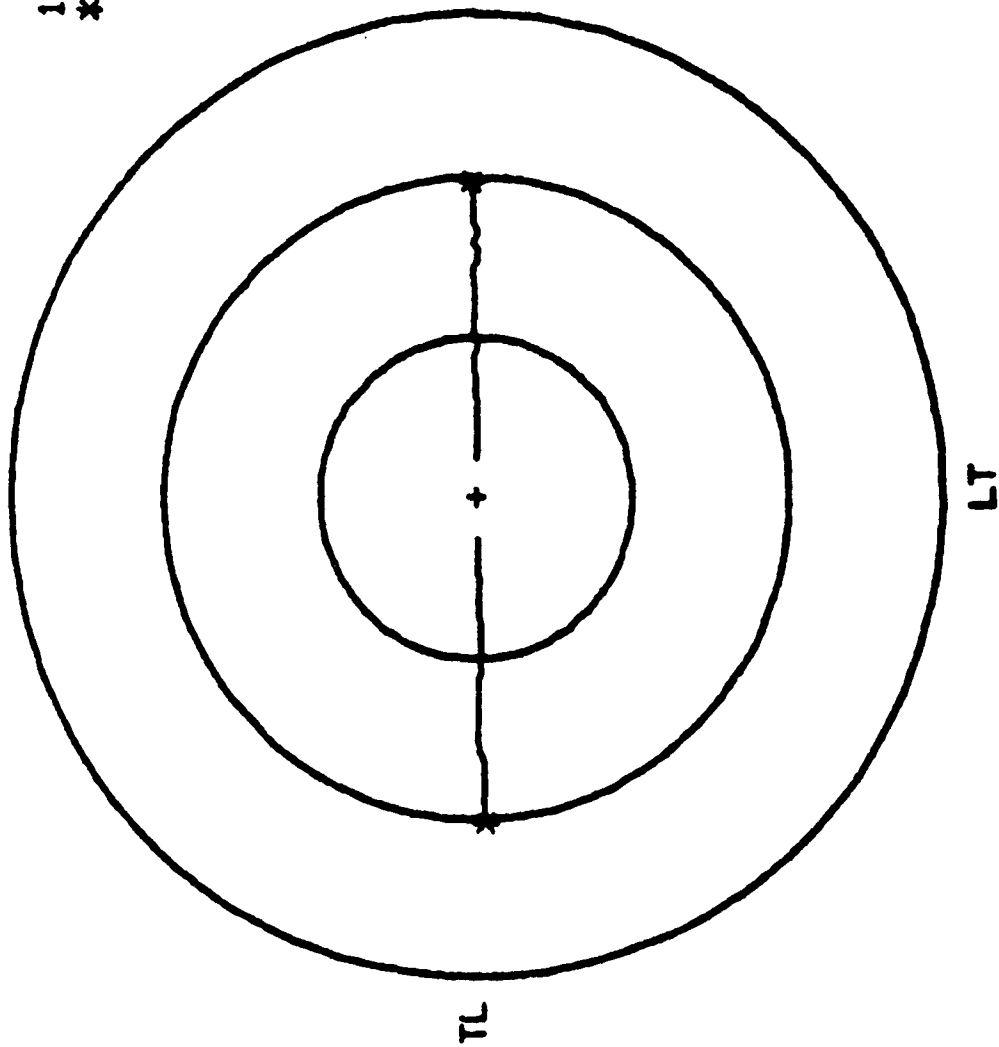


DA/DB inch/block

SPECIMEN 7-8

TEST CASE 116

1 IN SPACING  
\* TEST STOPPED



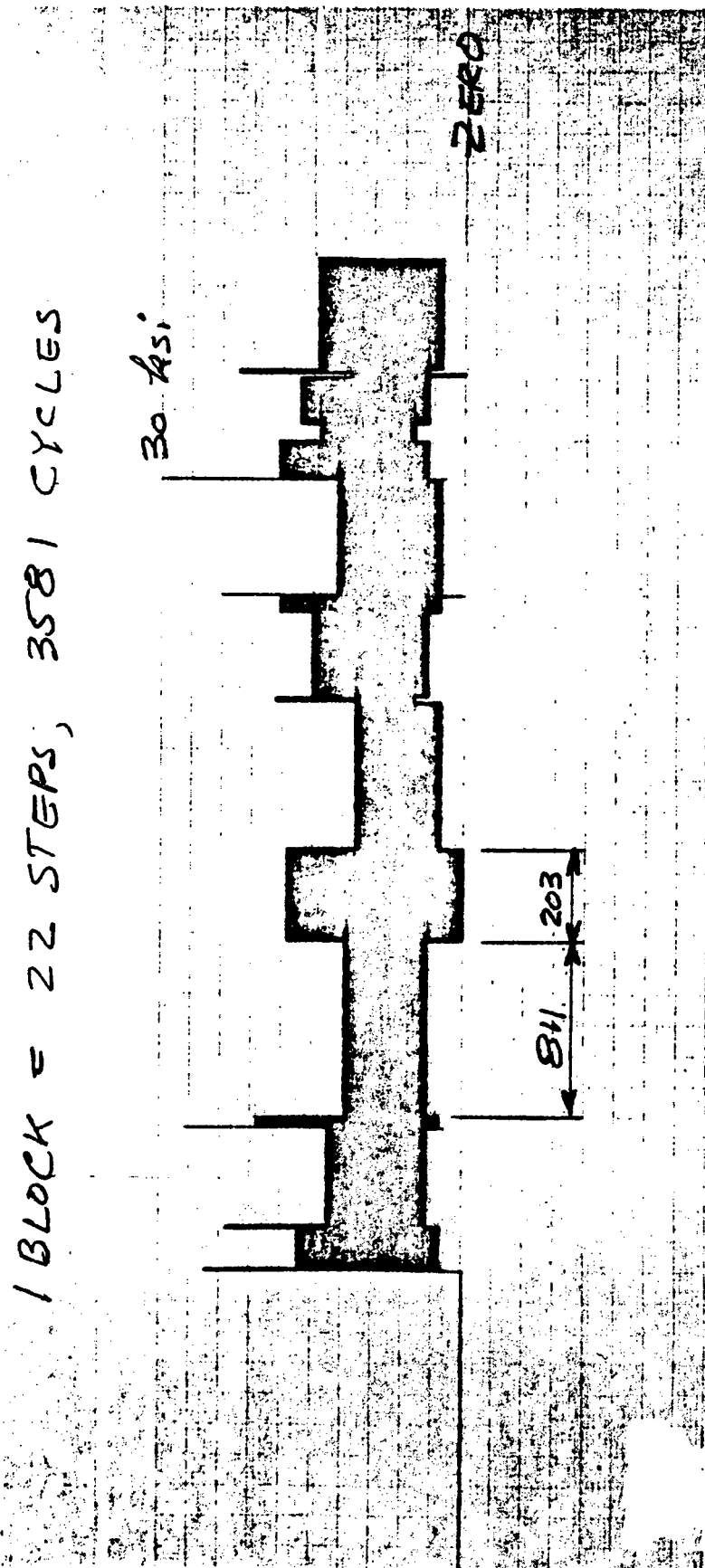


Figure 54 Spectrum Profile (Truncated Spectrum)

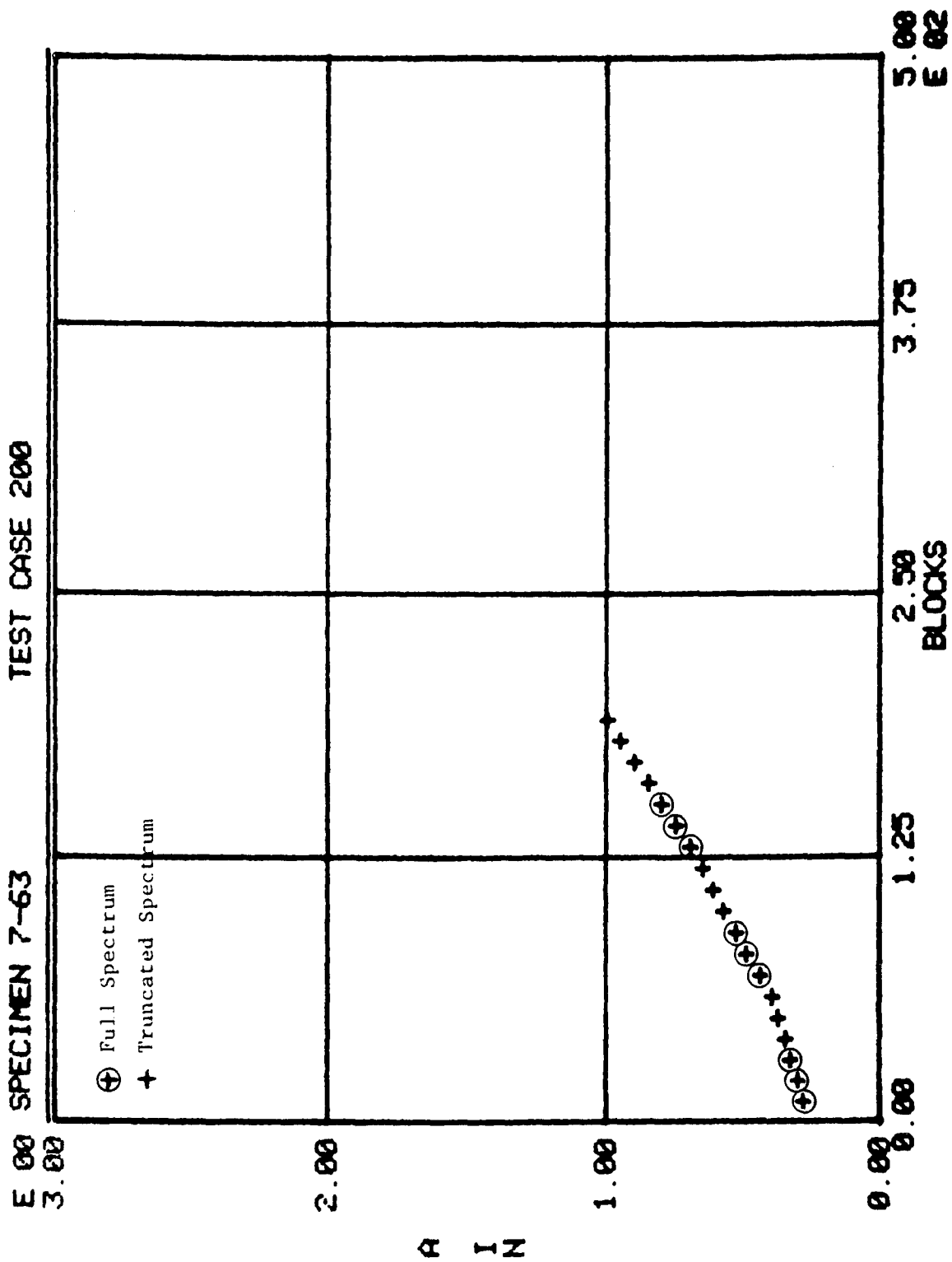
-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 200 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-63 FLAW TYPE - I  
TEMP = 75 F REL HUM = 55 % 5-16-78  
B = .179 IN R(L) = .1 R(T) = .1  
FREQ = HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.267  
-----

Spectrum Load

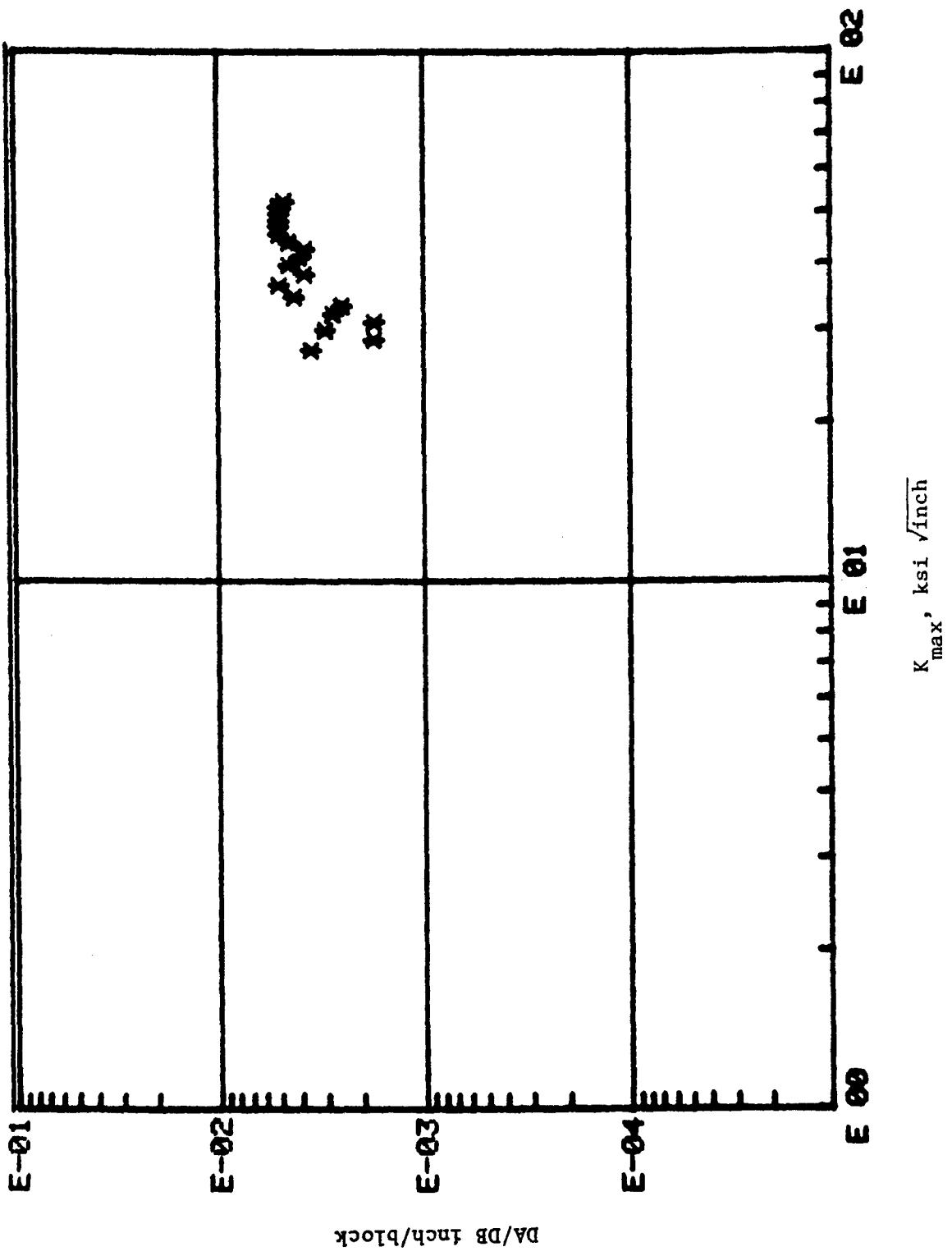
(Full Spectrum and Truncated Spectrum)



REF #	P(L) KIPS	P(T) KIPS	TOTAL BLOCKS	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	54.96	0	0	5	5	180	0
2	54.96	0	10	5.8	5.6	180	0
3	54.96	0	20	6	6.1	180	0
4	54.96	0	30	6.7	6.6	180	0
5	54.96	0	40	7	7	180	0
6	54.96	0	50	7.6	7.5	180	0
7	54.96	0	60	8.1	8	180	0
8	54.96	0	70	8.9	8.9	180	0
9	54.96	0	80	9.9	9.9	180	0
10	54.96	0	90	10.7	10.6	180	0
11	54.96	0	100	11.6	11.5	180	0
12	54.96	0	110	12.4	12.3	180	0
13	54.96	0	120	13.2	13	180	0
14	54.96	0	130	14	14	180	0
15	54.96	0	140	15	15	180	0
16	54.96	0	150	16	16	180	0
17	54.96	0	160	17	17	180	0
18	54.96	0	170	18	18	180	0
19	54.96	0	180	19	19	180	0
20	54.96	0	190	20	19.9	180	0



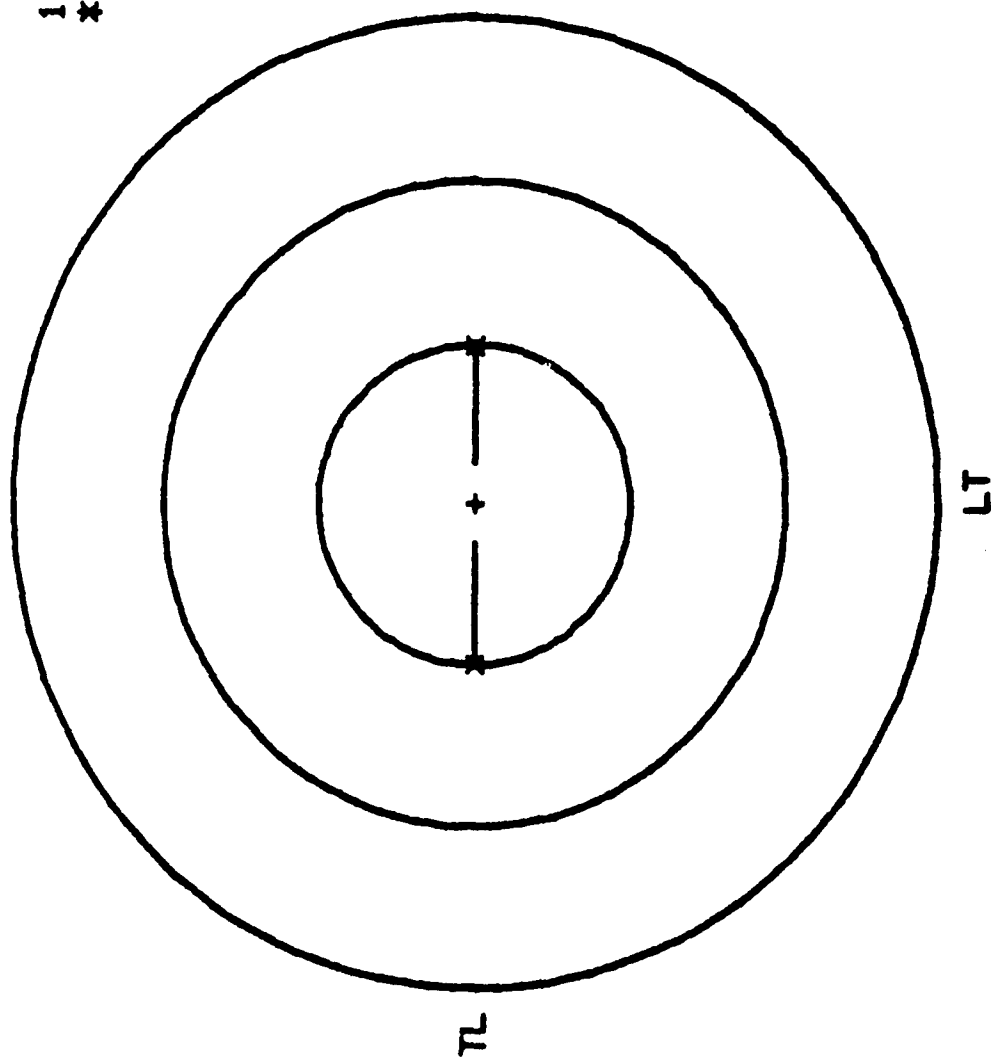
SPECIMEN 7-63 TEST CASE 200



SPECIMEN 7-63

TEST CASE 200

1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 2024-T3 TEST CASE 101 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-24 FLAW TYPE - 7

TEMP = 72 F REC HUM = 48 % 12/86/77

B = .171 IN R(L) = .1 R(T) = .1

FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN

BIAXIAL RATIO = 0  
-----

Overload Ratio = 2.0

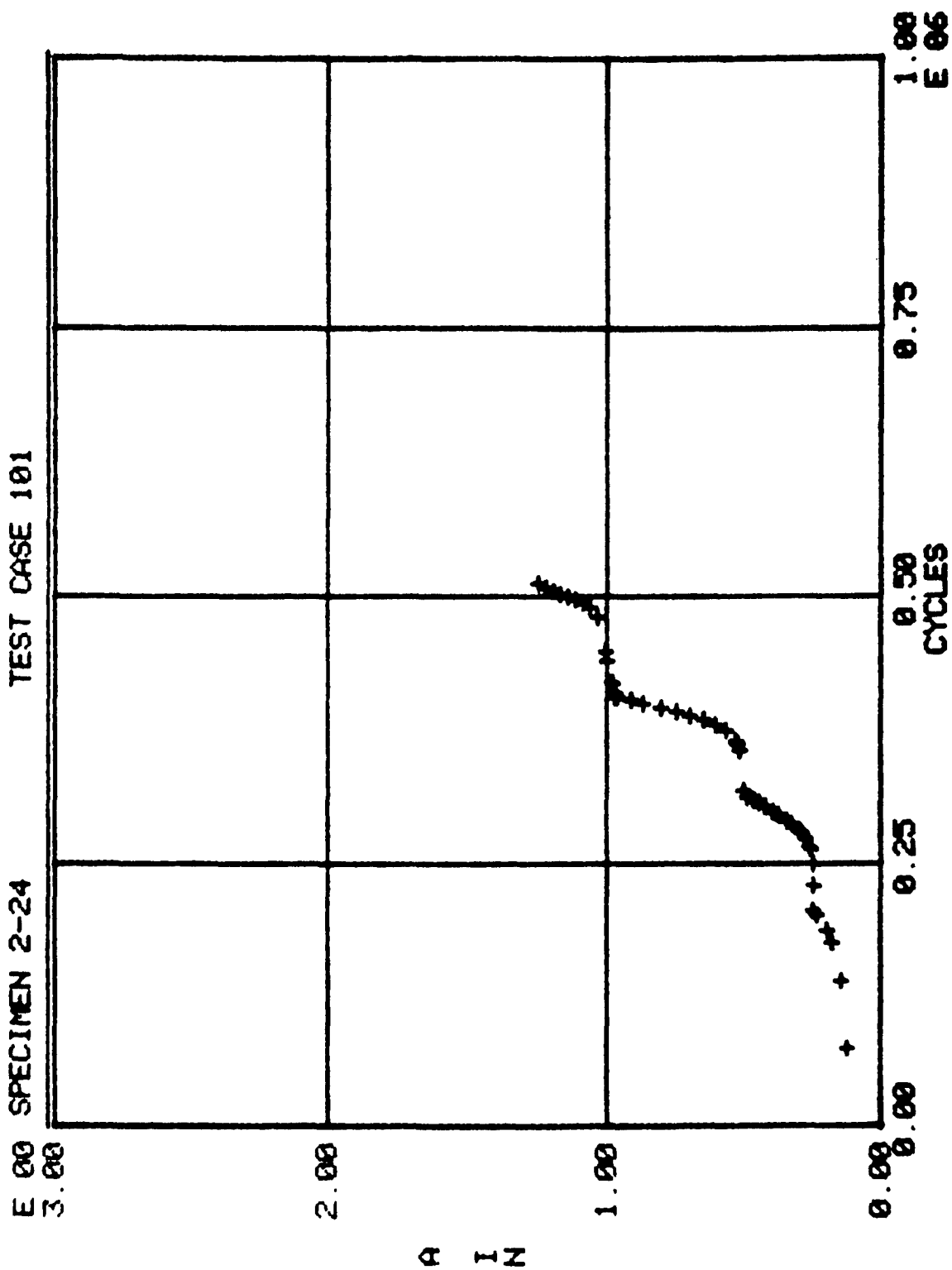
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	19.71	5.25	0	2	1.9	180	0
2	19.71	5.25	75750	2.5	2.6	180	0
3	19.71	5.25	140140	3	3.1	180	0
4	19.71	5.25	176780	3.5	3.9	180	0
5	19.71	5.25	188170	4	4	180	0
6	19.71	5.25	203160	4.5	5	180	0
7	19.71	5.25	206260	4.9	5.2	180	0
8	19.71	5.25	+1	5	5.2	180	0
9	19.71	5.25	230520	5	5.2	180	0
10	19.71	5.25	250000	5	5.2	180	0
11	19.71	5.25	264360	5.1	5.5	180	0
12	19.71	5.25	266810	5.2	5.5	180	0
13	19.71	5.25	273820	5.5	5.8	180	0
14	19.71	5.25	279410	5.8	6	180	0
15	19.71	5.25	281340	6	6.1	180	-1
16	19.71	5.25	287680	6.5	6.8	180	-1
17	19.71	5.25	291210	7	7	180	-1
18	19.71	5.25	296450	7.5	7.8	180	-2
19	19.71	5.25	299450	8	8	180	-2
20	19.71	5.25	304250	8.5	8.7	180	-2
21	19.71	5.25	307560	9	9.1	180	-3
22	19.71	5.25	310610	9.5	9.4	180	-3
23	19.71	5.25	312630	10	9.8	180	-3
24	19.71	5.25	+1	10	9.9	180	-3
25	19.71	5.25	319780	10.2	10.1	180	-3
26	19.71	5.25	356980	10.5	10.4	180	-3
27	19.71	5.25	362740	10.8	10.5	180	-3
28	19.71	5.25	365150	11	10.5	180	-3
29	19.71	5.25	375210	12	10.9	180	-3
30	19.71	5.25	380810	13	11.4	181	-3
31	19.71	5.25	385450	14	12.2	181	-3
32	19.71	5.25	389520	15	13.1	181	-3
33	19.71	5.25	393150	16	14.1	180	-3
34	19.71	5.25	397230	17	15.2	180	-3
35	19.71	5.25	401170	18	16.8	179	-3
36	19.71	5.25	403780	19	17.6	179	-3
37	19.71	5.25	406530	20	18.6	178	-4
38	19.71	5.25	+1	20.1	18.6	178	-4
39	19.71	5.25	410550	20.3	18.7	178	-4
40	19.71	5.25	420910	20.5	18.9	178	-4
41	19.71	5.25	440620	20.8	19.2	178	-4
42	19.71	5.25	448920	21	19.2	179	-4
43	19.71	5.25	482000	22	19.4	179	-4
44	19.71	5.25	490470	23	19.5	180	-4
45	19.71	5.25	494420	24	19.5	180	-4
46	19.71	5.25	498140	25	19.6	180	-4
47	19.71	5.25	501070	26	19.7	180	-4
48	19.71	5.25	503690	27	19.8	180	-4
49	19.71	5.25	506100	28	19.8	180	-4
50	19.71	5.25	508830	29	19.9	180	-4

SPECIMEN 2-24

TEST CASE 101

PAGE 3

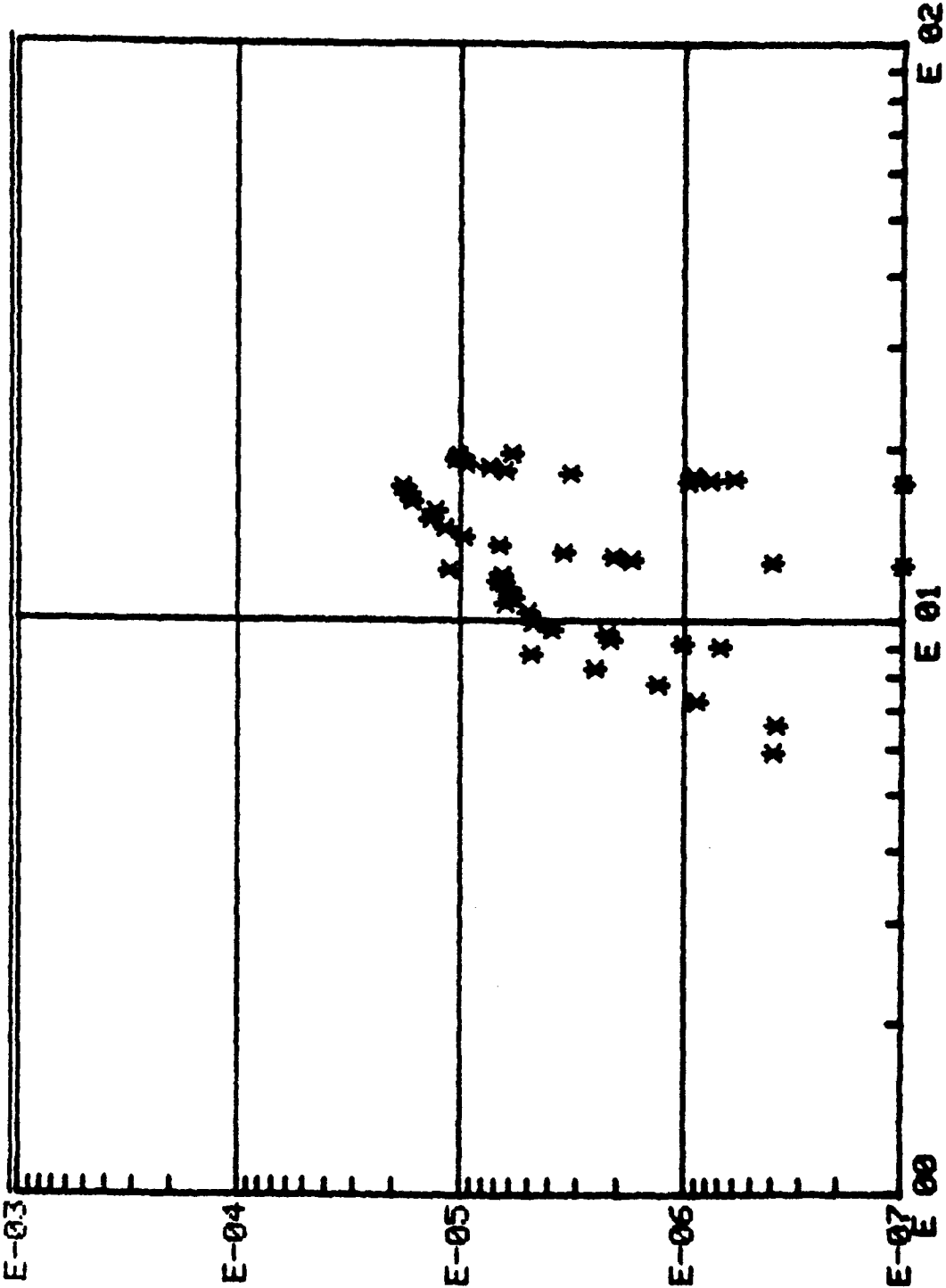
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	19.71	5.25	513400	30	20	100	-3





# SPECIMEN 2-24 TEST CASE 101

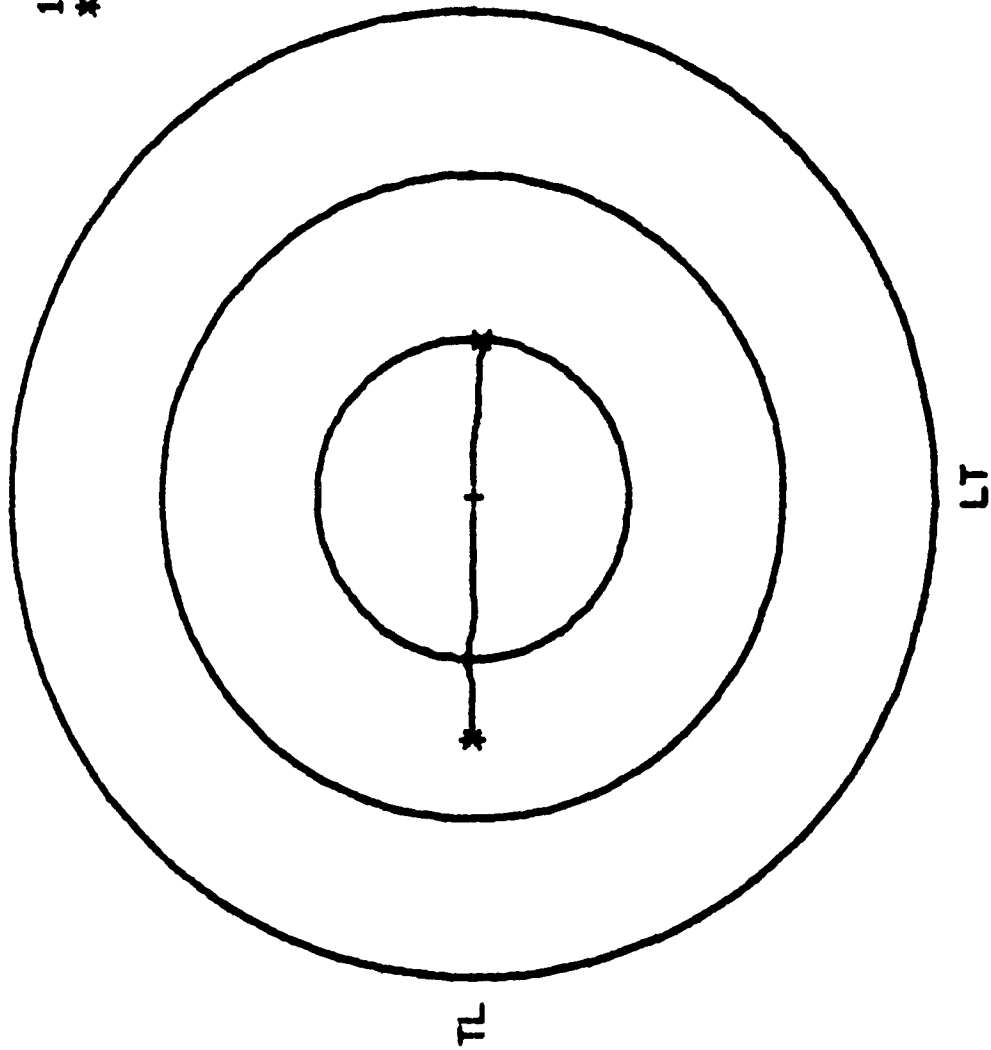
E-03



SPECIMEN 2-24

TEST CASE 101

1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 2024-T3

SPEC LT-2-5

CCT SPECIMEN TYPE

TEST CASE 102

TEMP = 75 F

REL HUM = 50 %

10/27/77

W = 7.01 IN

B = .10 IN

R = .1

FREQUENCY = 10 HZ

LAB AIR ENVIRONMENT

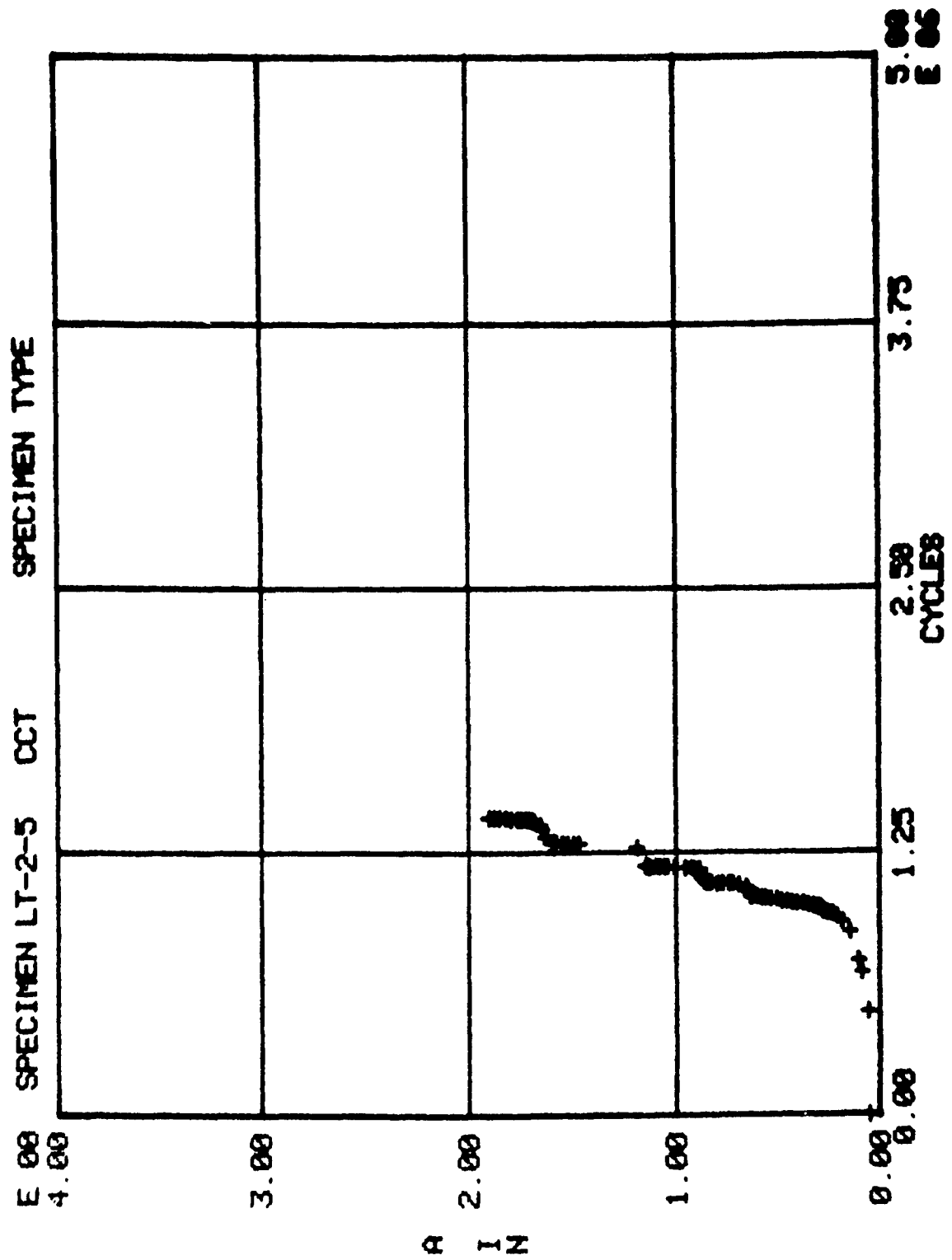
GRID SPACING = .05 IN

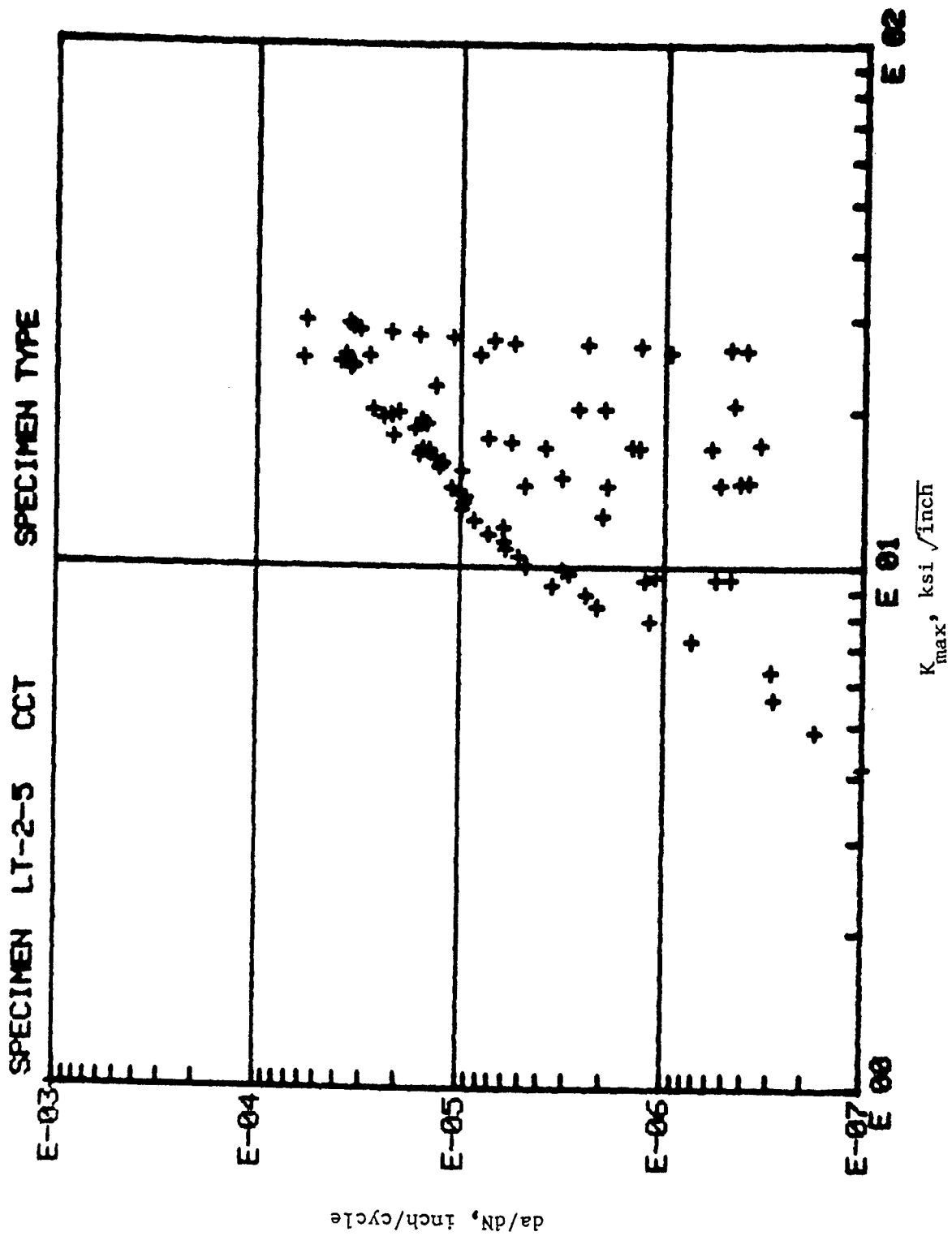
FILE CODE: \$LT25  
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Overload Ratios = 1.67, 1.67, 2.0, 2.0, 2.0, 2.0

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
1	12.6	0	1.2	1.2	2	4
2	12.6	483730	1.2	2	2	4
3	12.6	669390	2	2.5	2.7	1
4	12.6	730410	2.4	3	3	1.2
5	12.6	866860	3	3.5	4.1	2.2
6	12.6	916260	3.7	4	5	3
7	12.6	938640	4.2	4.5	5.5	3.6
8	12.6	950840	4.8	5	6	4.1
9	12.6	960110	5.1	5.5	6.5	4.6
10	12.6	966530	5.7	6	6.8	5
11	12.6	+1	5.7	6	6.8	5
12	12.6	967530	5.7	6	6.9	5
13	12.6	970180	5.7	6.1	6.9	5
14	12.6	974640	5.7	6.1	7	5.1
15	12.6	981380	6	6.2	7	5.3
16	12.6	984810	6.2	6.4	7.2	5.5
17	12.6	986790	6.3	6.5	7.4	5.6
18	12.6	991230	6.7	7	7.8	6
19	12.6	996050	7.3	7.5	8.2	6.5
20	12.6	1.00022E+06	7.8	8	8.7	7
21	12.6	1.00491E+06	8.3	8.5	9.3	7.7
22	12.6	1.00814E+06	8.8	9	9.9	8
23	12.6	1.01264E+06	9.3	9.5	10.5	8.6
24	12.6	1.01512E+06	9.7	10	10.9	9
25	12.6	+1	9.7	10	10.9	9
26	12.6	1.02754E+06	10.2	10.5	11.3	9.6
27	12.6	1.03059E+06	10.9	11	12	10.1
28	12.6	1.03353E+06	11.6	11.5	12.3	10.9
29	12.6	1.03551E+06	12	12	12.8	11
30	12.6	1.03808E+06	12.4	12.5	13.4	11.6
31	12.6	1.03988E+06	12.8	13	13.8	11.9
32	12.6	+1	12.9	13	13.8	11.9
33	12.6	1.04040E+06	13	13.1	13.8	11.9
34	12.6	1.04237E+06	13	13.2	13.9	12
35	12.6	1.05639E+06	13	13.3	14	12.4
36	12.6	1.06523E+06	13.2	13.4	14	12.4
37	12.6	1.08464E+06	13.3	13.5	14.3	12.5
38	12.6	1.09719E+06	13.9	14.5	15.2	13.2
39	12.6	1.10009E+06	14.4	15	15.9	13.8
40	12.6	1.10167E+06	14.8	15.5	16.3	14.1
41	12.6	1.10411E+06	15.4	16	16.9	14.8
42	12.6	1.10577E+06	15.9	16.5	17.3	15.2
43	12.6	1.10781E+06	16.5	17.2	17.9	15.9
44	12.6	1.10868E+06	16.8	17.5	18.2	16
45	12.6	+1	16.8	17.5	18.3	16.1
46	12.6	1.10909E+06	17	17.6	18.4	16.2
47	12.6	1.11006E+06	17	17.7	18.5	16.3
48	12.6	1.11286E+06	17	17.8	18.6	16.4
49	12.6	1.11917E+06	17	17.9	18.6	16.6
50	12.6	1.12517E+06	17.1	18	18.9	16.8

REF #	P-MAX KIPS	TOTAL CYCLES	GRID REF 1	GRID REF 2	GRID REF 3	GRID REF 4
51	12.6	1.16963E+06	17.5	18.6	19	16.9
52	12.6	1.17293E+06	17.7	19	19.7	17.1
53	12.6	1.17585E+06	17.9	19.5	20.5	17.3
54	12.6	1.17714E+06	18.4	20	21.2	17.8
55	12.6	1.18012E+06	19.3	21.5	22.1	18.5
56	12.6	1.18268E+06	20	22.2	23	19.2
57	12.6	1.18340E+06	20.2	22.5	23.2	19.4
58	12.6	1.18461E+06	20.8	23	23.8	20
59	12.6	1.18547E+06	21	23.5	24.2	20.4
60	12.6	1.18665E+06	21.5	24	24.8	20.7
61	12.6	+1	21.5	24	25	20.8
62	12.6	1.18693E+06	21.7	24.2	25	21
63	12.6	1.18883E+06	21.8	24.3	25.1	21
64	12.6	1.19212E+06	22	24.5	25.2	21.2
65	12.6	1.27667E+06	23	25	25.8	22.2
66	12.6	1.29742E+06	31.2	28	28.8	30
67	12.6	1.29825E+06	32	28.5	29.2	30.6
68	12.6	1.29903E+06	32.5	29	29.7	31.2
69	12.6	1.29971E+06	33	29.5	30.3	31.7
70	12.6	1.30024E+06	33.7	30	30.8	32.5
71	12.6	+1	33.9	30.1	30.9	32.6
72	12.6	1.30033E+06	33.9	30.3	30.9	32.6
73	12.6	1.30050E+06	34	30.4	31.1	32.7
74	12.6	1.30205E+06	34.3	30.5	31.4	33
75	12.6	1.32030E+06	34.7	31	32	33.5
76	12.6	1.36312E+06	34.9	31.5	32	33.9
77	12.6	1.38141E+06	35	32	32	34
78	12.6	1.40429E+06	35.4	33	32.7	34.3
79	12.6	1.40899E+06	35.4	33.5	33	34.4
80	12.6	1.41103E+06	35.5	34	33.2	34.5
81	12.6	1.41357E+06	35.6	34.5	33.9	34.6
82	12.6	1.41597E+06	35.6	35.5	35	34.6
83	12.6	1.41707E+06	35.6	36	35.9	34.6
84	12.6	1.41843E+06	35.7	37	37.2	34.6
85	12.6	1.41919E+06	35.7	38	38	34.7
86	12.6	1.42004E+06	35.8	39	39.1	34.8
87	12.6	1.42079E+06	35.8	40	40.2	34.8
88	12.6	1.42123E+06	35.8	41	41.2	34.8





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CRACK GROWTH TEST OF 2024-T3 TEST CASE 108 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-38 FLAW TYPE - 7  
TEMP = 75 F REL HUM = 45 % 11-28-77  
B = .172 IN R(L) = .1 R(T) = .1  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
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Overload Ratio = 2.0



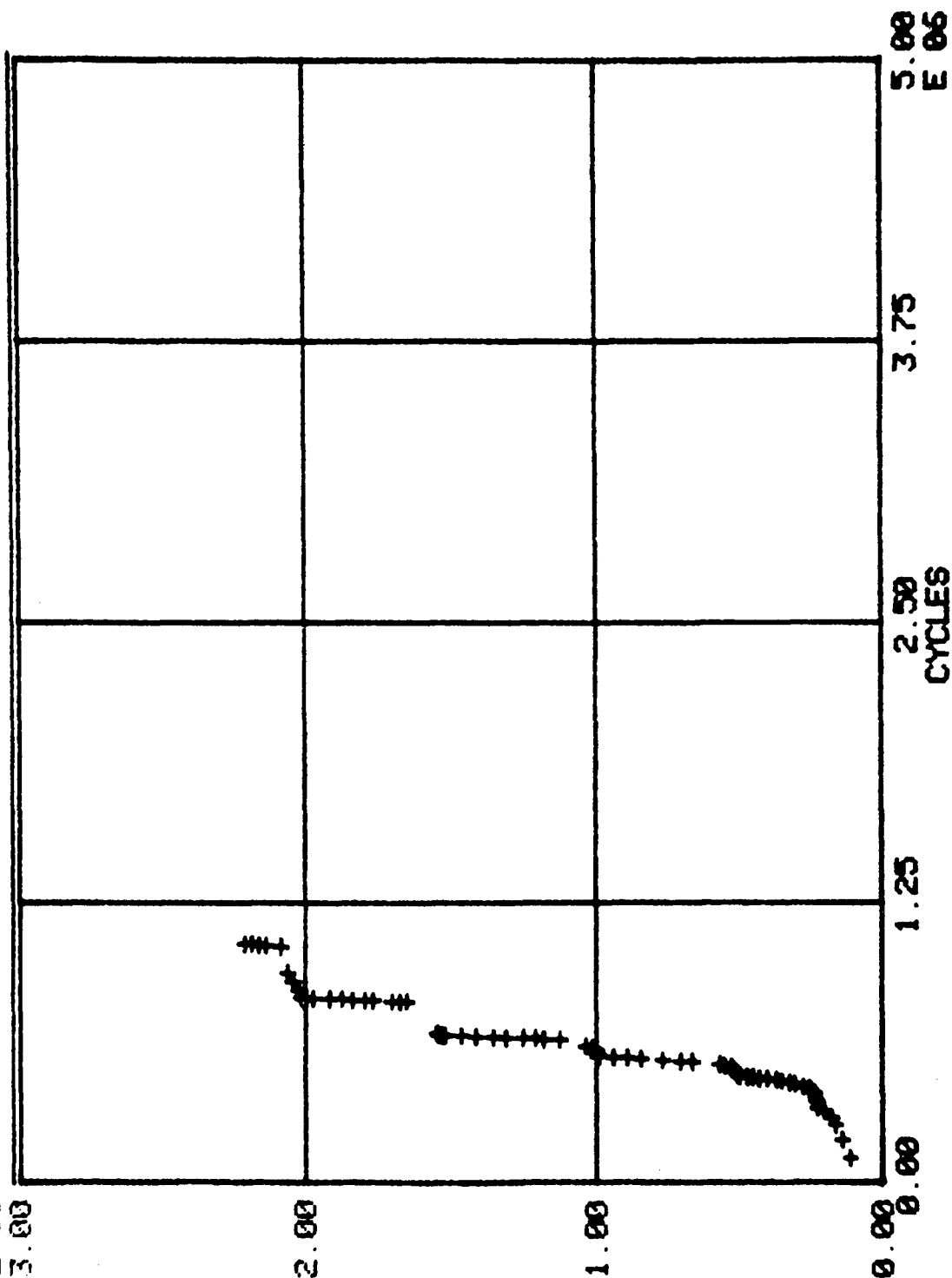
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	22.3	15.07	0	1.9	1.9	179	0
2	22.3	15.07	115400	2.5	2.3	180	-2
3	22.3	15.07	197070	3	2.9	181	-4
4	22.3	15.07	263650	3.5	3.2	182	-5
5	22.3	15.07	299070	4	3.4	184	-5
6	22.3	15.07	326300	4.5	4	184	-6
7	22.3	15.07	341460	5	4.4	184	-7
8	22.3	15.07	+1	5	4.45	184	-7
9	22.3	15.07	363780	5	4.45	184	-7
10	22.3	15.07	369500	5.05	4.5	183	-7
11	22.3	15.07	383770	5.1	4.6	183	-7
12	22.3	15.07	408600	5.25	4.6	183	-7
13	22.3	15.07	424790	5.5	4.8	183	-7
14	22.3	15.07	429830	5.6	5	183	-7
15	22.3	15.07	433040	6	5.5	183	-7
16	22.3	15.07	448200	6.5	6	183	-6
17	22.3	15.07	452700	7	6.3	184	-6
18	22.3	15.07	459490	7.5	6.9	183	-6
19	22.3	15.07	463080	8	7.1	183	-5
20	22.3	15.07	469750	8.5	8	182	-5
21	22.3	15.07	473390	9	8.5	182	-5
22	22.3	15.07	478020	9.5	9	182	-4
23	22.3	15.07	480090	10	9.3	182	-5
24	22.3	15.07	484620	10.4	10	182	-5
25	22.3	15.07	+1	10.5	10	182	-5
26	22.3	15.07	494250	10.6	10.1	182	-5
27	22.3	15.07	511900	10.8	10.25	182	-5
28	22.3	15.07	522270	11	10.5	182	-5
29	22.3	15.07	531120	11.5	11	181	-5
30	22.3	15.07	533450	12	11.2	181	-5
31	22.3	15.07	545000	13.7	13.1	180	-5
32	22.3	15.07	549500	14.5	14.1	180	-5
33	22.3	15.07	554210	15.7	15.2	180	-5
34	22.3	15.07	560000	17.2	16.7	181	-5
35	22.3	15.07	563210	18.2	17.7	181	-5
36	22.3	15.07	566350	19.1	18.6	181	-5
37	22.3	15.07	570300	20.3	19.5	181	-5
38	22.3	15.07	+1	20.4	19.6	181	-5
39	22.3	15.07	599250	20.4	19.6	181	-5
40	22.3	15.07	602480	20.6	19.8	181	-5
41	22.3	15.07	611820	20.7	19.9	181	-5
42	22.3	15.07	617420	21	20.5	181	-5
43	22.3	15.07	643980	22.2	22.9	181	-4
44	22.3	15.07	648620	23	24.4	181	-2
45	22.3	15.07	650290	23.3	25.2	181	-2
46	22.3	15.07	652450	24	26.1	181	-2
47	22.3	15.07	655680	25.1	27.4	181	-1
48	22.3	15.07	658000	26	28.3	181	-1
49	22.3	15.07	660500	27.2	29.5	180	-1
50	22.3	15.07	662700	28.2	30.5	180	-1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	22.3	15.07	664900	29.3	31.7	180	-2
52	22.3	15.07	+1	29.5	31.8	180	-2
53	22.3	15.07	670360	29.8	32	180	-2
54	22.3	15.07	677830	30	32.1	180	-2
55	22.3	15.07	815150	34	32.1	180	-2
56	22.3	15.07	816840	35	32.1	180	-2
57	22.3	15.07	818690	36	32.1	180	-2
58	22.3	15.07	820410	37	33.8	180	-2
59	22.3	15.07	821880	38	34	180	-2
60	22.3	15.07	823650	39	34.5	181	-2
61	22.3	15.07	825190	40	35.1	181	-2
62	22.3	15.07	827290	41	35.7	180	-2
63	22.3	15.07	829300	42.2	36.7	180	-2
64	22.3	15.07	830200	42.7	37.2	180	-2
65	22.3	15.07	+1	43	37.2	180	-2
66	22.3	15.07	837000	43.2	37.5	180	-2
67	22.3	15.07	865000	43.3	37.7	180	-2
68	22.3	15.07	906000	43.8	38	180	-2
69	22.3	15.07	941780	44	38.5	180	-2
70	22.3	15.07	1.06168E+06	45	38.5	180	-2
71	22.3	15.07	1.06566E+06	47	38.5	180	-2
72	22.3	15.07	1.06709E+06	48	38.5	180	-2
73	22.3	15.07	1.06916E+06	49	38.5	181	-2
74	22.3	15.07	1.07048E+06	50	38.5	181	-2

# TEST CASE 108

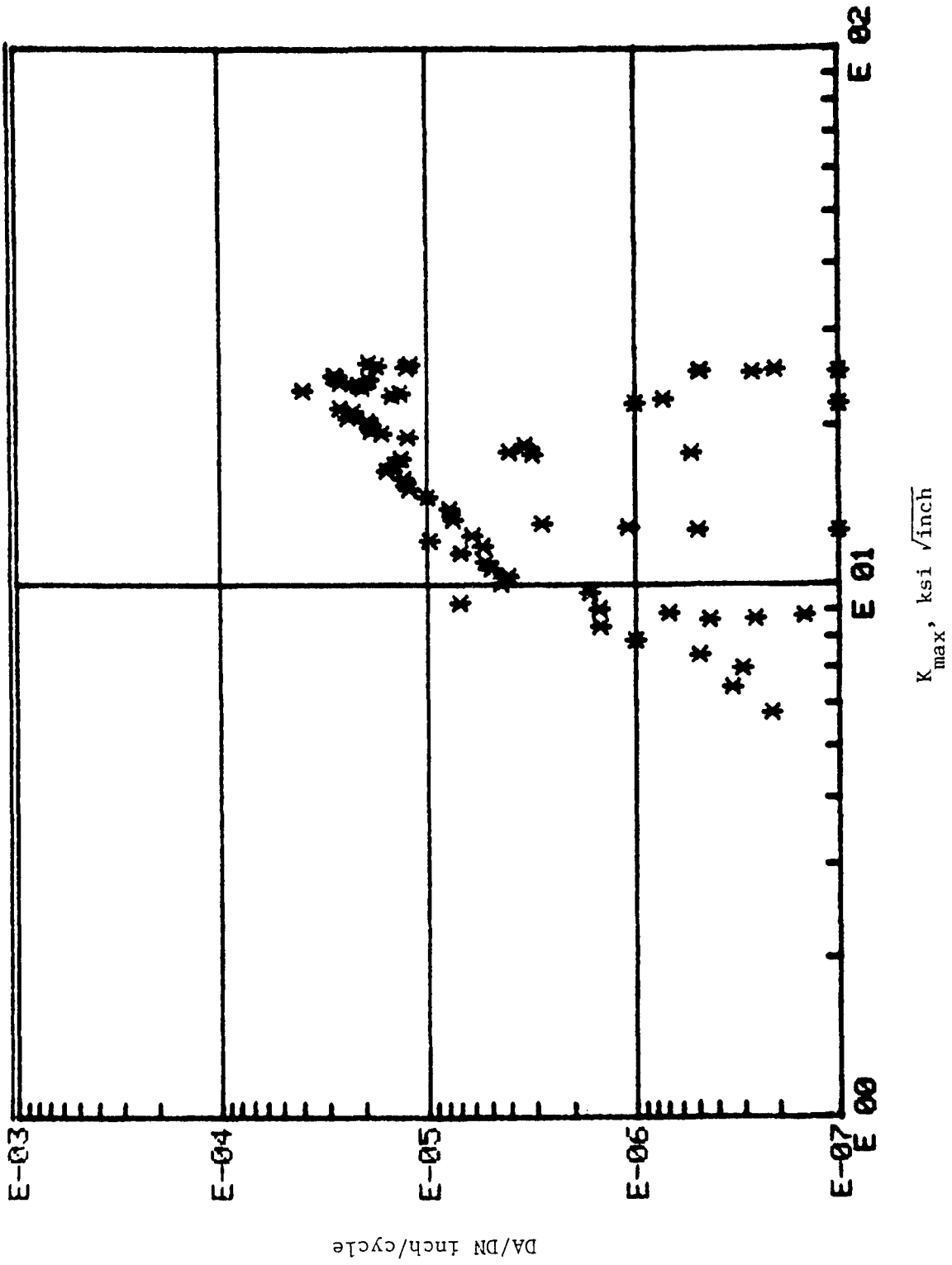
SPECIMEN 2-38

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3.00



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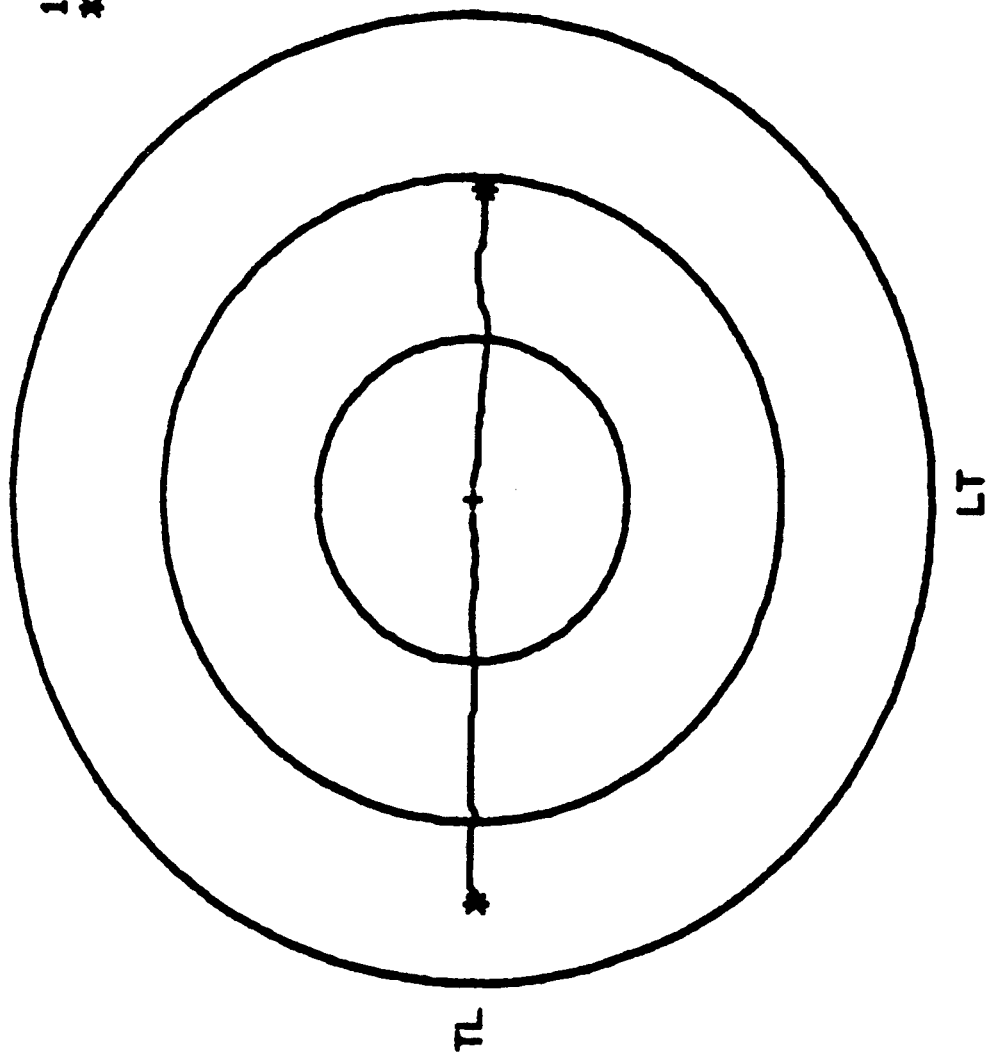
SPECIMEN 2-38 TEST CASE 108



SPECIMEN 2-38

TEST CASE 108

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 109 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-34 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 55 % 11-21-77  
B = .178 IN R(L) = .1 R(T) = .1  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

Overload Ratio = 2.0

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	22.3	15.07	0	2.5	1.6	180	0
2	22.3	15.07	115740	3	2.4	180	0
3	22.3	15.07	197600	3.5	3	180	0
4	22.3	15.07	251740	4	4	180	0
5	22.3	15.07	276510	4.5	4.9	180	0
6	22.3	15.07	288270	5	5.2	180	0
7	22.3	15.07	292630	5.5	5.4	180	0
8	22.3	15.07	302300	6	6	180	0
9	22.3	15.07	307980	6.5	6.5	179	0
10	22.3	15.07	313070	7	7	179	0
11	22.3	15.07	318250	7.5	7.6	178	0
12	22.3	15.07	322250	8	8.1	178	0
13	22.3	15.07	325950	8.5	8.8	178	0
14	22.3	15.07	329770	9	9.2	178	0
15	22.3	15.07	335660	10	10	177	0
16	22.3	15.07	+1	10	10	177	0
17	22.3	15.07	384770	13.7	13.9	179	-2
18	22.3	15.07	390560	15	15.4	180	-2
19	22.3	15.07	394120	16	16.4	179	-3
20	22.3	15.07	398100	17	17.6	178	-3
21	22.3	15.07	401120	18	18.7	178	-3
22	22.3	15.07	404100	19	19.6	177	-3
23	22.3	15.07	407250	20	20.5	177	-3
24	22.3	15.07	+1	20	20.5	177	-3
25	22.3	15.07	419400	20.5	20.7	177	-3
26	22.3	15.07	427400	20.6	21	177	-3
27	22.3	15.07	435400	20.7	21.1	177	-4
28	22.3	15.07	438400	20.8	21.2	177	-4
29	22.3	15.07	440400	20.9	21.3	177	-4
30	22.3	15.07	443400	21	21.4	177	-4
31	22.3	15.07	450240	22	22.6	177	-4
32	22.3	15.07	453420	23	23.5	176	-4
33	22.3	15.07	456650	24	24.5	176	-4
34	22.3	15.07	459640	25	25.9	177	-4
35	22.3	15.07	462520	26	26.9	176	-4
36	22.3	15.07	464630	27	27.9	176	-4
37	22.3	15.07	466540	28	28.8	176	-4
38	22.3	15.07	469020	29	30	175	-4
39	22.3	15.07	470490	30	30.9	175	-4
40	22.3	15.07	+1	30	30.9	175	-4
41	22.3	15.07	471520	30.1	31	175	-4
42	22.3	15.07	493500	30.4	31.4	175	-4
43	22.3	15.07	501000	30.5	31.5	175	-4
44	22.3	15.07	575900	30.6	31.8	175	-4
45	22.3	15.07	602100	30.9	32.1	175	-4
46	22.3	15.07	622750	30.9	40.8	175	-5
47	22.3	15.07	624740	30.9	41.5	175	-5
48	22.3	15.07	625840	30.9	42	175	-5
49	22.3	15.07	627360	30.9	43	175	-5
50	22.3	15.07	629060	30.9	44.2	175	-6

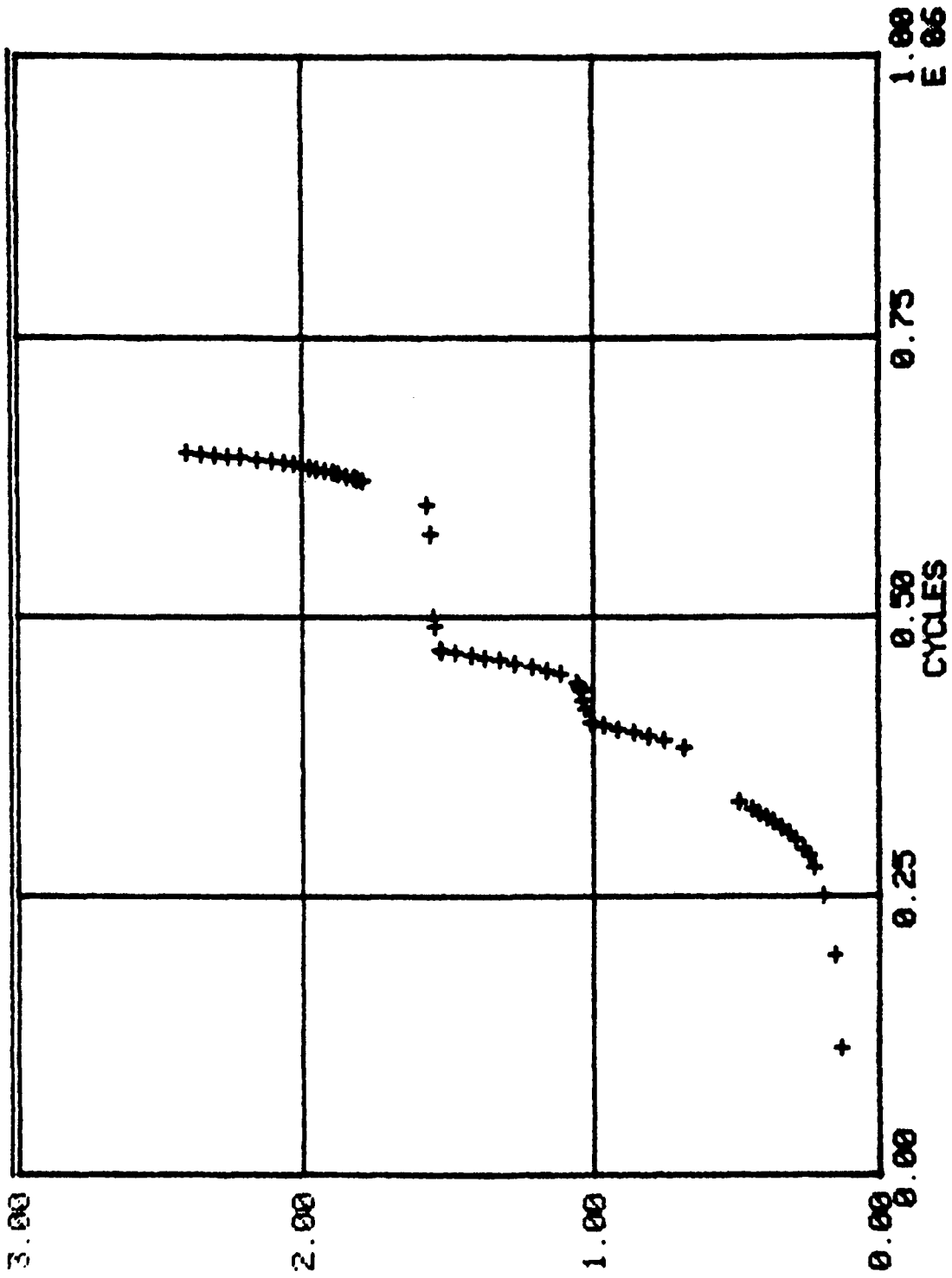
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	22.3	15.07	630500	30.9	45	175	-6
52	22.3	15.07	631900	30.9	46	175	-5
53	22.3	15.07	633430	31	47.1	175	-5
54	22.3	15.07	634750	31	48	175	-5
55	22.3	15.07	636000	31.1	49	175	-5
56	22.3	15.07	637510	31.2	50	175	-5
57	22.3	15.07	639000	31.6	51	175	-5
58	22.3	15.07	640700	32.1	52	175	-5
59	22.3	15.07	642400	33	53.3	175	-5
60	22.3	15.07	643900	34.1	54.5	175	-5
61	22.3	15.07	644900	35	55.3	175	-5
62	22.3	15.07	646000	36	56.2	175	-5
63	22.3	15.07	647200	37	57.1	175	-5
64	22.3	15.07	648300	38	58	175	-5



# TEST CASE 109

E 00 SPECIMEN 2-34

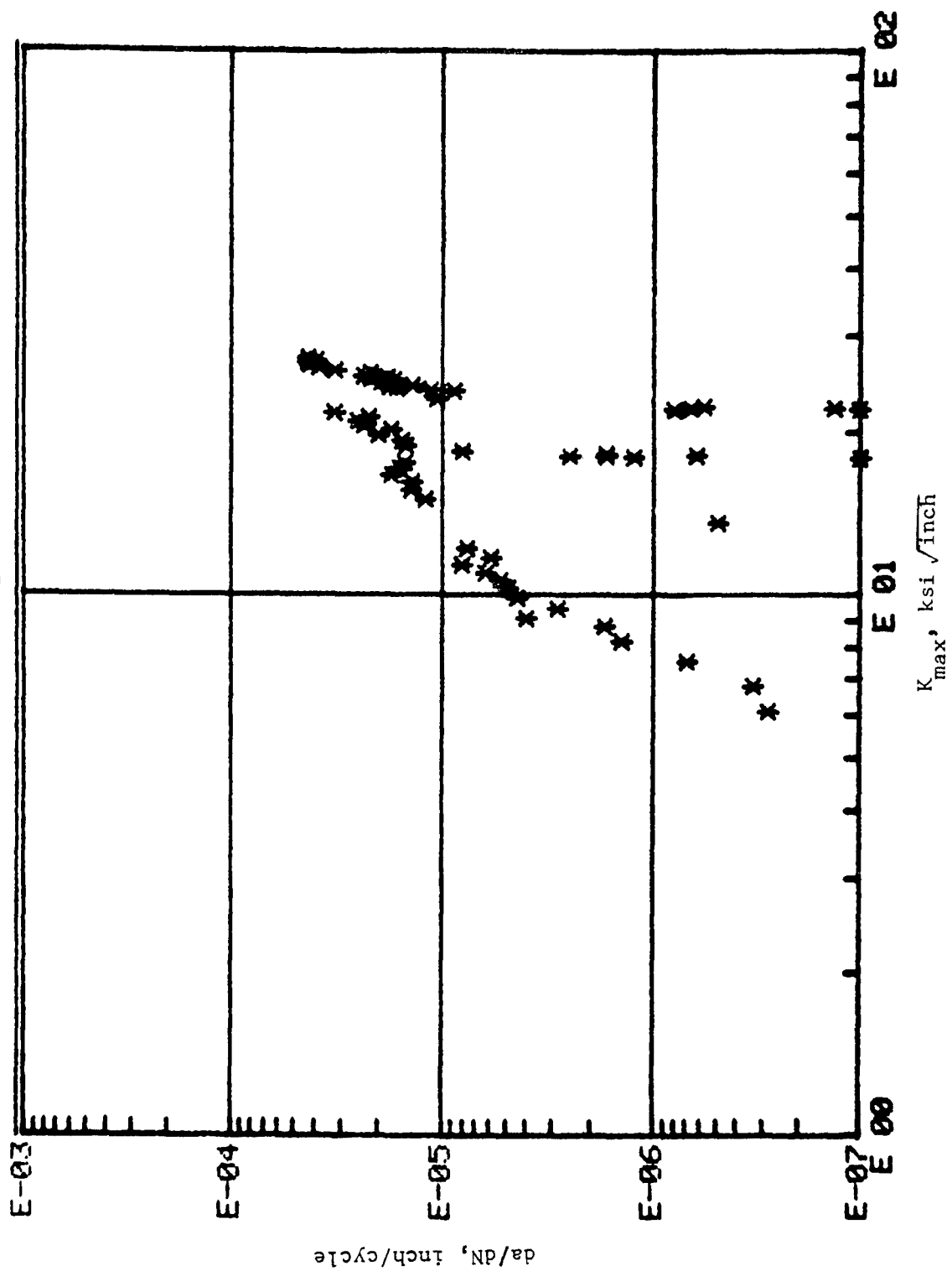
3.00  
E 00



A I N

SPECIMEN 2-34

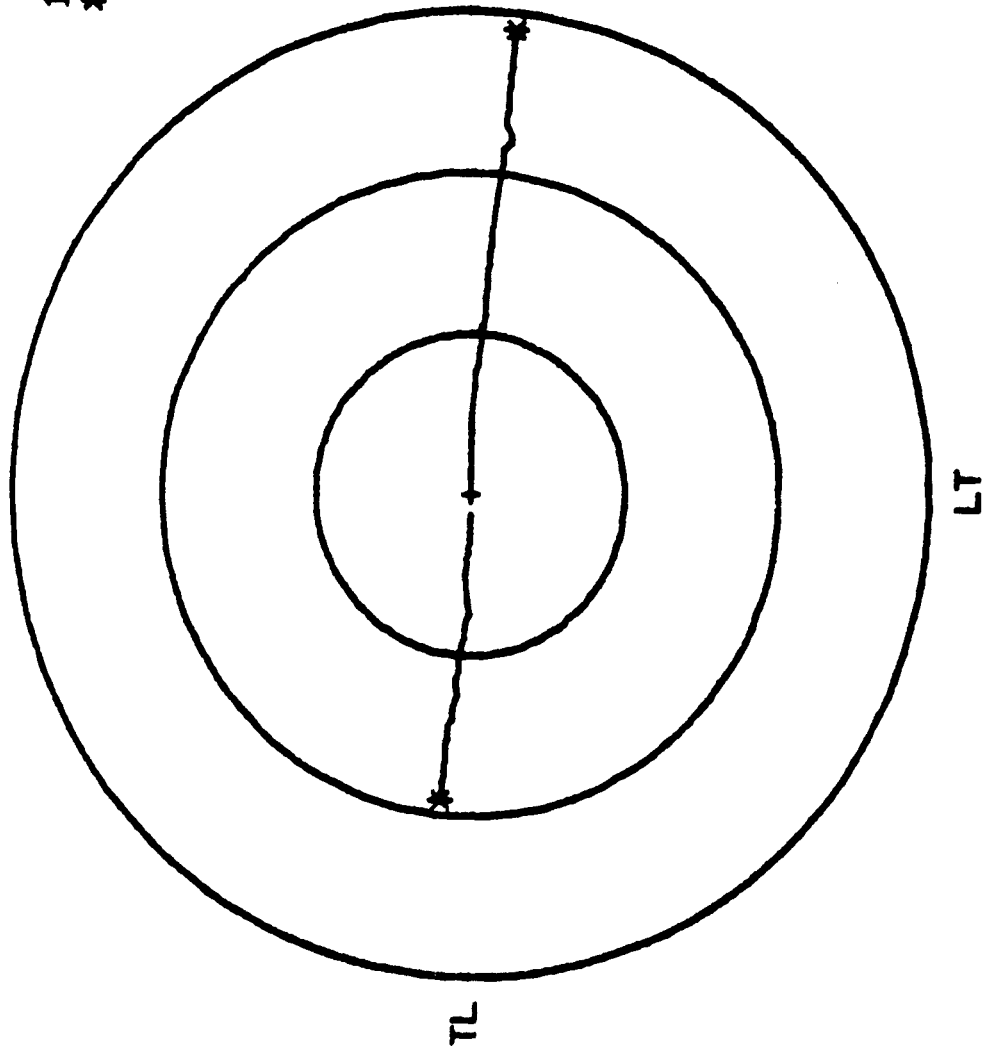
TEST CASE 109



SPECIMEN 2-34

TEST CASE 109

1 IN SPACING  
\* TEST STOPPED

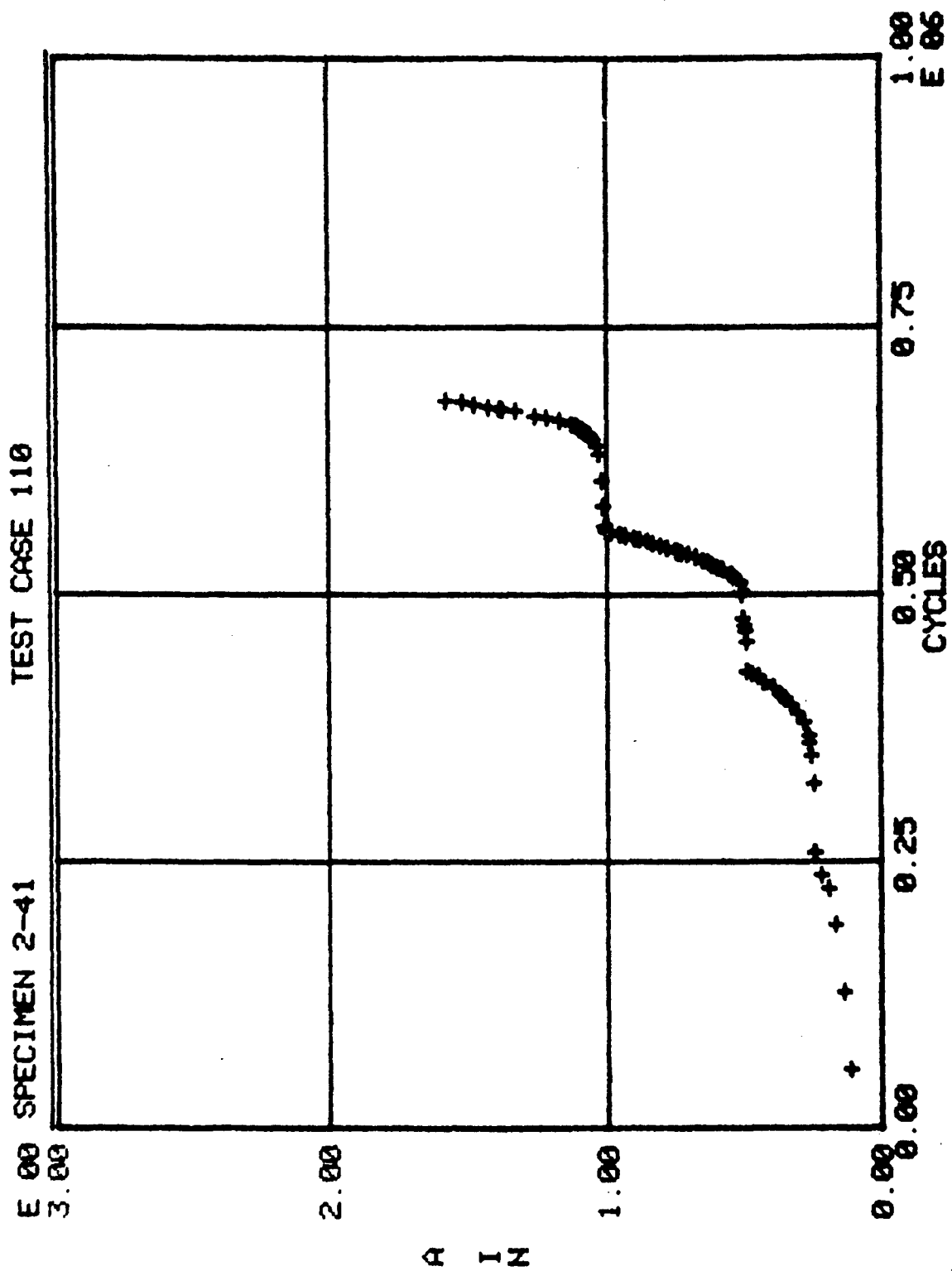


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CRACK GROWTH TEST OF 2024-T3 TEST CASE 110 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-41 FLAW TYPE - 1  
TEMP = 73 F REL HUM = 55 % 3-23-78  
B = .179 IN R(L) = .1 R(T) = .1  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
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Overload Ratio = 2.0

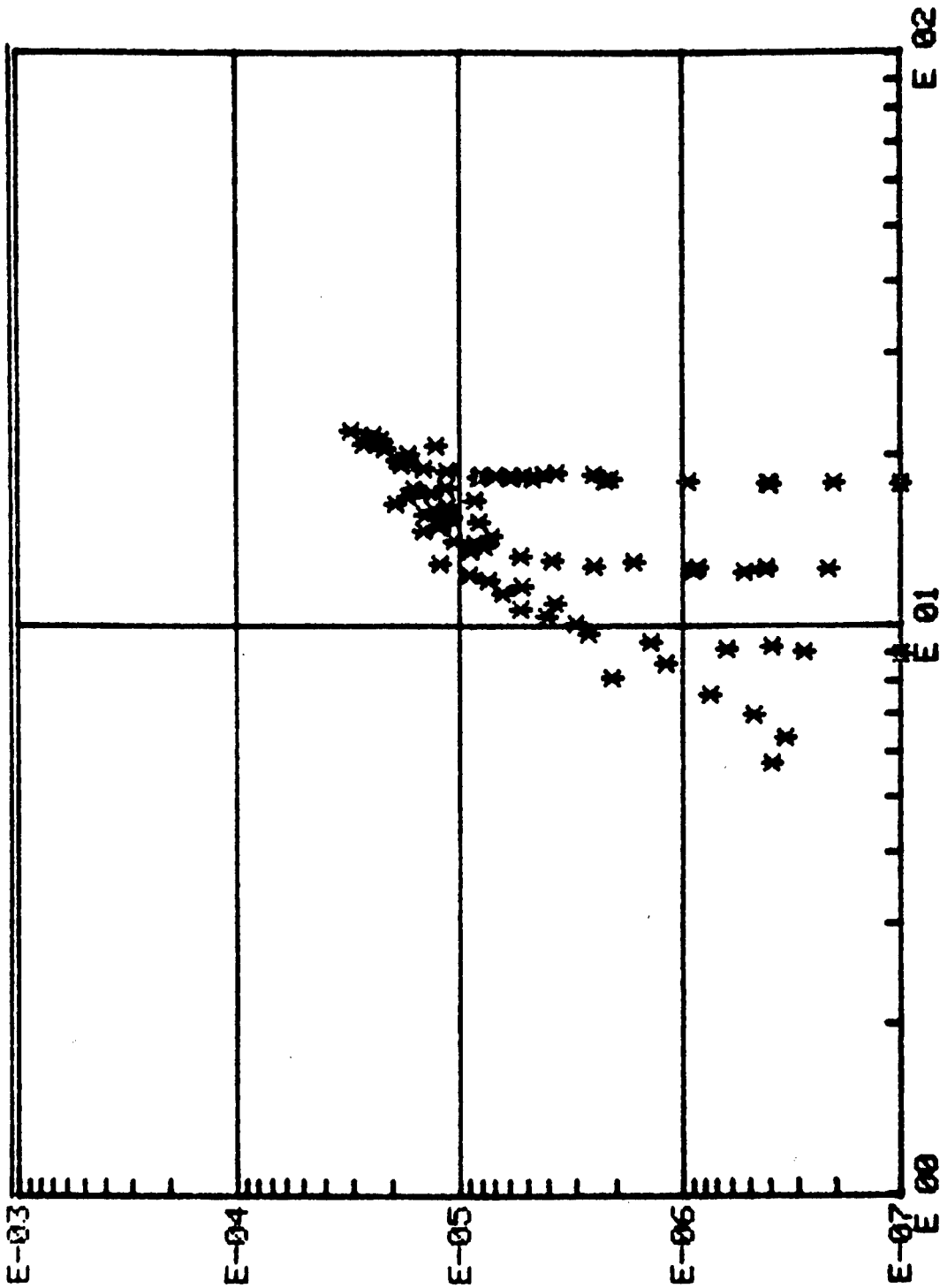
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.11	-4.57	0	1.5	2.3	186	-3
2	17.11	-4.57	56380	2	2.7	186	-3
3	17.11	-4.57	129230	2.5	3.2	185	-3
4	17.11	-4.57	191950	3	3.9	184	-3
5	17.11	-4.57	225060	3.5	4.4	183	-3
6	17.11	-4.57	238210	4.1	4.9	182	-3
7	17.11	-4.57	259230	4.5	5.5	182	-3
8	17.11	-4.57	+1	4.5	5.6	182	-3
9	17.11	-4.57	324550	4.6	5.6	181	-3
10	17.11	-4.57	351040	4.7	5.8	181	-3
11	17.11	-4.57	362900	4.9	5.9	181	-3
12	17.11	-4.57	369190	5	5.9	181	-3
13	17.11	-4.57	381750	5.5	6.1	181	-2
14	17.11	-4.57	391130	6	6.6	181	-2
15	17.11	-4.57	398550	6.5	7	181	-2
16	17.11	-4.57	404060	7	7.4	181	-2
17	17.11	-4.57	406400	7.3	7.6	181	-2
18	17.11	-4.57	414400	8	8.1	181	-2
19	17.11	-4.57	419840	8.6	8.9	181	-2
20	17.11	-4.57	424090	9.1	9.3	180	-2
21	17.11	-4.57	426800	9.5	9.7	180	-2
22	17.11	-4.57	429020	10	10	180	-2
23	17.11	-4.57	+1	10	10	180	-2
24	17.11	-4.57	456860	10	10	180	-2
25	17.11	-4.57	466400	10	10.2	180	-3
26	17.11	-4.57	472020	10.1	10.3	180	-3
27	17.11	-4.57	478000	10.2	10.3	180	-3
28	17.11	-4.57	501000	10.3	10.4	180	-3
29	17.11	-4.57	504010	10.3	10.5	180	-3
30	17.11	-4.57	510000	10.4	10.5	180	-3
31	17.11	-4.57	513000	10.5	10.7	180	-3
32	17.11	-4.57	514030	10.7	11	180	-3
33	17.11	-4.57	517050	10.9	11	180	-3
34	17.11	-4.57	519000	11	11.2	180	-3
35	17.11	-4.57	525530	11.5	12.1	180	-3
36	17.11	-4.57	527210	12	12.2	180	-3
37	17.11	-4.57	529800	12.3	12.7	180	-3
38	17.11	-4.57	531270	12.5	13	180	-3
39	17.11	-4.57	533170	13	13.3	180	-3
40	17.11	-4.57	537360	13.5	14	180	-2
41	17.11	-4.57	539080	14	14.5	180	-2
42	17.11	-4.57	541110	14.5	15	180	-1
43	17.11	-4.57	542160	14.8	15.2	180	-1
44	17.11	-4.57	543880	15	15.3	180	-1
45	17.11	-4.57	545820	15.5	16	180	-1
46	17.11	-4.57	547400	16	16.4	180	-1
47	17.11	-4.57	549520	16.5	17	180	-1
48	17.11	-4.57	551280	17	17.3	180	-1
49	17.11	-4.57	552840	17.5	18	180	-1
50	17.11	-4.57	554590	18	18.1	180	-1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	17.11	-4.57	556500	18.5	18.9	180	-1
52	17.11	-4.57	558190	19	19.3	180	-1
53	17.11	-4.57	560070	19.5	20	180	0
54	17.11	-4.57	561150	19.9	20.1	180	-1
55	17.11	-4.57	+1	19.9	20.4	180	-1
56	17.11	-4.57	565770	19.9	20.5	180	-1
57	17.11	-4.57	584300	20	20.7	181	-1
58	17.11	-4.57	608650	20.2	20.7	180	-1
59	17.11	-4.57	632740	20.4	20.9	180	-1
60	17.11	-4.57	640690	20.4	21.2	180	-1
61	17.11	-4.57	646270	20.5	21.6	180	-1
62	17.11	-4.57	647340	20.5	21.8	180	-1
63	17.11	-4.57	650920	20.6	22	180	-1
64	17.11	-4.57	651340	20.6	22.1	180	-1
65	17.11	-4.57	651950	20.6	22.3	180	-1
66	17.11	-4.57	652810	20.7	22.4	180	-1
67	17.11	-4.57	653290	20.8	22.4	180	-1
68	17.11	-4.57	654370	20.8	22.7	180	-1
69	17.11	-4.57	655800	20.8	22.9	180	-1
70	17.11	-4.57	656800	20.8	23	180	-1
71	17.11	-4.57	657200	21	23	180	-1
72	17.11	-4.57	659230	21.3	23	180	-1
73	17.11	-4.57	661800	21.9	23.2	180	-2
74	17.11	-4.57	663760	23	23.7	180	-2
75	17.11	-4.57	666360	24	24.6	180	-2
76	17.11	-4.57	668600	24.8	25.5	180	-2
77	17.11	-4.57	672700	26	27.1	179	-3
78	17.11	-4.57	674900	27	28	179	-3
79	17.11	-4.57	675690	27.2	28.2	179	-3
80	17.11	-4.57	677180	28	29	179	-3
81	17.11	-4.57	679400	29	30	178	-3
82	17.11	-4.57	681250	29.8	31	178	-3
83	17.11	-4.57	683210	31	32.2	178	-3



# SPECIMEN 2-41 TEST CASE 110

E-03 E-04 E-05 E-06 E-07

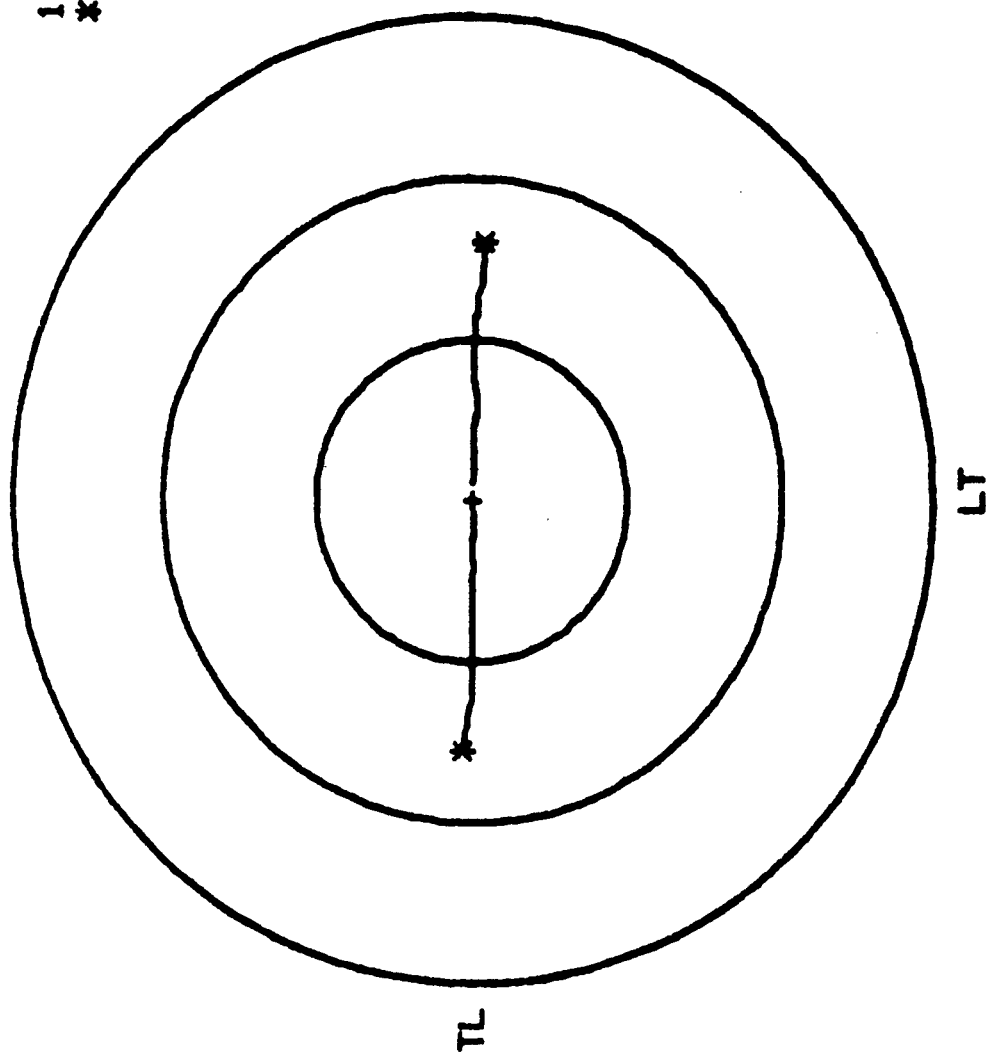




SPECIMEN 2-41      TEST CASE 110

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1 IN SPACING  
\* TEST STOPPED



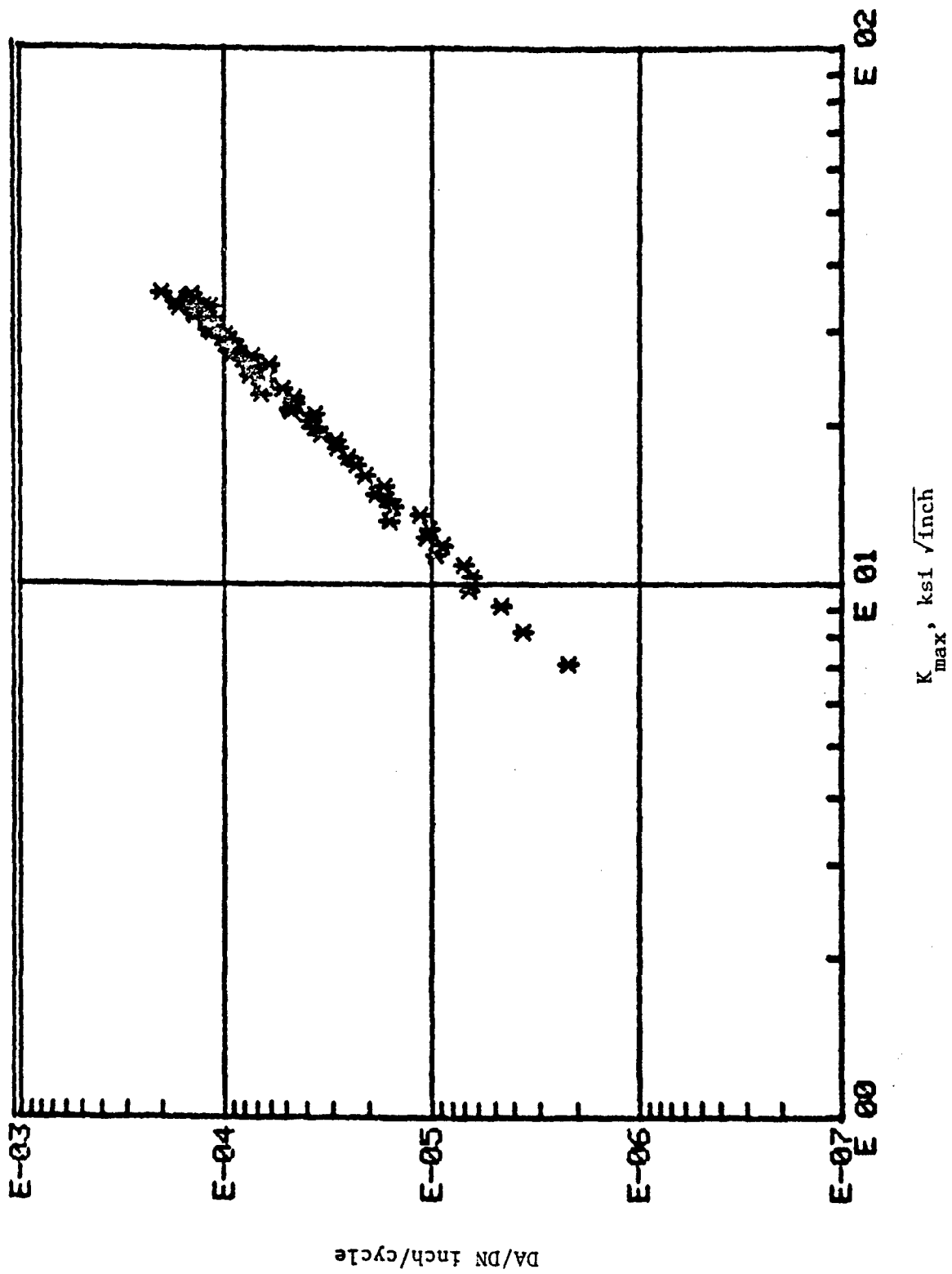
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CRACK GROWTH TEST OF 7075-T7 TEST CASE 39 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-54 FLAW TYPE - 7  
TEMP = 72 F REL HUM = 49 % 01-31-78  
B = .172 IN R(L) = .1 R(T) = .1  
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN  
BIAXIAL RATIO = 1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	24.3	24.2	0	2	2	168	12
2	24.3	24.2	11330	2.5	2.5	170	10
3	24.3	24.2	24480	3.5	3.4	173	7
4	24.3	24.2	29870	4	3.9	174	6
5	24.3	24.2	34050	4.5	4.5	175	5
6	24.3	24.2	37960	5	5	176	5
7	24.3	24.2	41910	5.6	5.5	176	4
8	24.3	24.2	44270	6	6	176	3
9	24.3	24.2	47360	6.6	6.5	176	3
10	24.3	24.2	49250	7	6.9	176	3
11	24.3	24.2	51670	7.5	7.4	176	2
12	24.3	24.2	53240	8	7.9	176	2
13	24.3	24.2	55650	8.5	8.5	176	2
14	24.3	24.2	57270	9	9	177	2
15	24.3	24.2	58790	9.5	9.5	177	2
16	24.3	24.2	60000	10	9.9	177	2
17	24.3	24.2	62950	11	10.9	177	2
18	24.3	24.2	65460	12	12	177	1
19	24.3	24.2	67620	13	13	177	1
20	24.3	24.2	69490	14	13.9	177	1
21	24.3	24.2	71350	15.1	14.9	177	1
22	24.3	24.2	72810	16	15.7	177	1
23	24.3	24.2	74210	17	16.6	177	1
24	24.3	24.2	75650	18	17.7	177	1
25	24.3	24.2	76880	19	18.6	177	0
26	24.3	24.2	78250	20	19.6	177	0
27	24.3	24.2	78460	20.2	19.8	177	0
28	24.3	24.2	79240	21	20.5	177	0
29	24.3	24.2	80340	22	21.5	177	0
30	24.3	24.2	81320	23	22.3	177	0
31	24.3	24.2	82120	24	23.4	177	0
32	24.3	24.2	83070	25	24.4	177	0
33	24.3	24.2	83750	26	25.2	177	0
34	24.3	24.2	84460	27	26	177	0
35	24.3	24.2	85090	28	26.9	177	0
36	24.3	24.2	85780	29	27.9	177	0
37	24.3	24.2	86460	30	28.9	177	0
38	24.3	24.2	87120	31	29.5	177	0
39	24.3	24.2	87730	32	30.5	177	0
40	24.3	24.2	88310	33	31.2	177	0
41	24.3	24.2	88810	34	32	178	0
42	24.3	24.2	89350	35	33	178	0
43	24.3	24.2	89860	36	33.0	178	0
44	24.3	24.2	90420	37	35	178	-1
45	24.3	24.2	90870	38	35.7	178	-1
46	24.3	24.2	91310	39	36.5	178	-1
47	24.3	24.2	91740	40	37.2	178	-1
48	24.3	24.2	92180	41	38.2	178	-1
49	24.3	24.2	92560	42	39	178	-1
50	24.3	24.2	93000	43	40	178	-1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	24.3	24.2	93400	44	40.8	178	-1
52	24.3	24.2	93760	45	41.5	178	-1
53	24.3	24.2	94170	46	42.5	178	-1
54	24.3	24.2	94520	47	43.4	178	-1
55	24.3	24.2	94980	48	45	178	-1
56	24.3	24.2	95350	49	46	178	-1
57	24.3	24.2	95640	50	46.9	178	-1
58	24.3	24.2	95960	51	47.4	178	-1
59	24.3	24.2	96280	52	48	178	-1
60	24.3	24.2	96600	53	49.2	178	-1
61	24.3	24.2	96980	54	50.5	178	-1
62	24.3	24.2	97320	55	51.5	178	-1
63	24.3	24.2	97690	56	52.6	178	-1
64	24.3	24.2	97940	57	53.6	178	-1

SPECIMEN 7-54

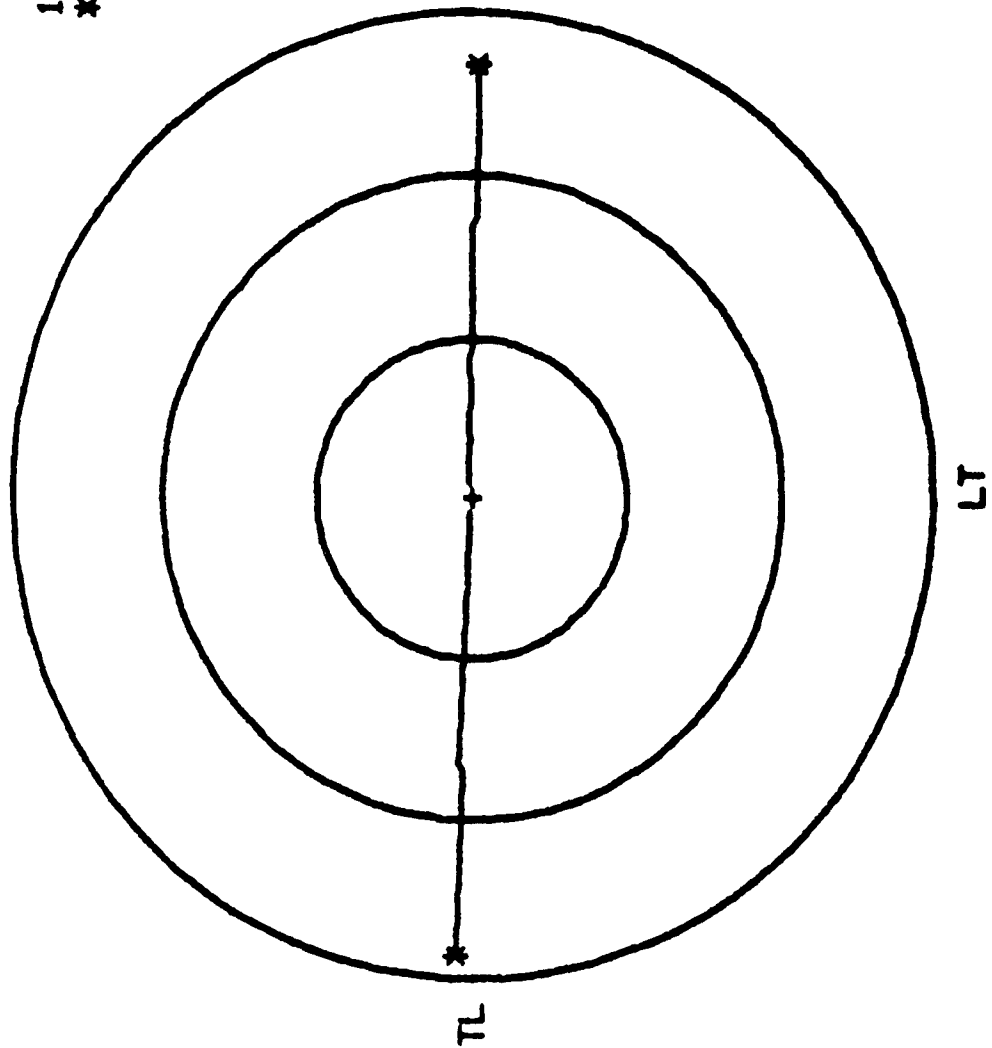
TEST CASE 39



SPECIMEN 7-54

TEST CASE 39

1 IN SPACING  
\* TEST STOPPED

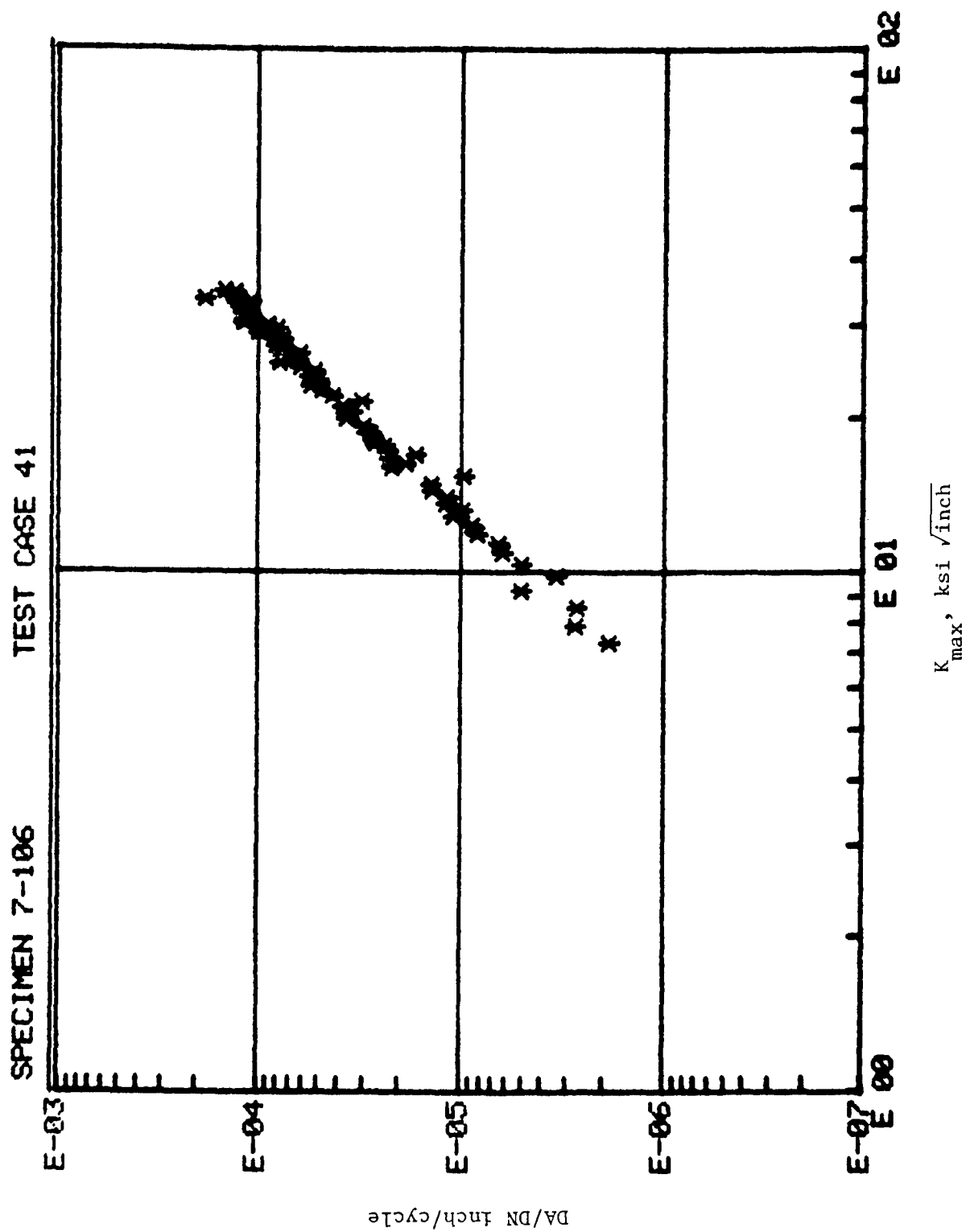


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CRACK GROWTH TEST OF 7075-T7 TEST CASE 41 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-106 FLAW TYPE - 7  
TEMP = 73 F REL HUM = 54 % 2-22-78  
B = .184 IN R(L) = .1 R(T) = .1  
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	23.96	12.42	0	2.2	2.2	180	0
2	23.96	12.42	9500	2.5	2.6	180	0
3	23.96	12.42	17780	3	3	180	0
4	23.96	12.42	27990	3.5	3.6	180	0
5	23.96	12.42	32920	4.1	4	180	0
6	23.96	12.42	39540	4.5	4.5	180	0
7	23.96	12.42	44490	5	5	180	0
8	23.96	12.42	48880	5.5	5.6	180	0
9	23.96	12.42	52690	6	6.1	180	0
10	23.96	12.42	55690	6.5	6.6	180	0
11	23.96	12.42	58520	7	7.1	180	0
12	23.96	12.42	61290	7.6	7.7	180	0
13	23.96	12.42	63310	8	8.1	180	0
14	23.96	12.42	65420	8.5	8.6	180	0
15	23.96	12.42	67570	9	9.1	180	0
16	23.96	12.42	69560	9.5	9.7	180	0
17	23.96	12.42	70980	9.9	10.1	180	0
18	23.96	12.42	76640	11	11.2	180	0
19	23.96	12.42	77900	11.5	11.8	180	0
20	23.96	12.42	78830	12	12	180	0
21	23.96	12.42	80260	12.5	12.8	180	0
22	23.96	12.42	81300	13	13	181	0
23	23.96	12.42	82720	13.5	13.8	181	0
24	23.96	12.42	83450	14	14	181	0
25	23.96	12.42	84580	14.5	14.7	181	-1
26	23.96	12.42	85330	15	15	181	-1
27	23.96	12.42	87110	16	16	181	-1
28	23.96	12.42	88950	17	17.2	181	-1
29	23.96	12.42	90440	18	18.4	181	-1
30	23.96	12.42	91880	19	19.4	181	-1
31	23.96	12.42	92930	19.8	20.2	181	-1
32	23.96	12.42	94630	21	21.1	182	-1
33	23.96	12.42	95860	22	22.2	182	-1
34	23.96	12.42	97010	23	23.4	182	-2
35	23.96	12.42	97930	24	24.4	182	-2
36	23.96	12.42	98920	25	25.4	181	-2
37	23.96	12.42	99870	26	26.5	181	-1
38	23.96	12.42	100770	27	27.4	181	-1
39	23.96	12.42	101590	28	28.4	181	-2
40	23.96	12.42	102390	29	29.9	181	-2
41	23.96	12.42	103250	30	31.2	181	-2
42	23.96	12.42	104010	31	32.1	181	-1
43	23.96	12.42	104700	32	33.4	181	-1
44	23.96	12.42	105390	33	34.4	181	-1
45	23.96	12.42	106170	34	35.8	181	-1
46	23.96	12.42	106870	35	36.9	181	-1
47	23.96	12.42	107500	36	38	182	-1
48	23.96	12.42	108030	37	39.1	182	-1
49	23.96	12.42	108620	38	40	182	-1
50	23.96	12.42	109180	39	41	182	-1



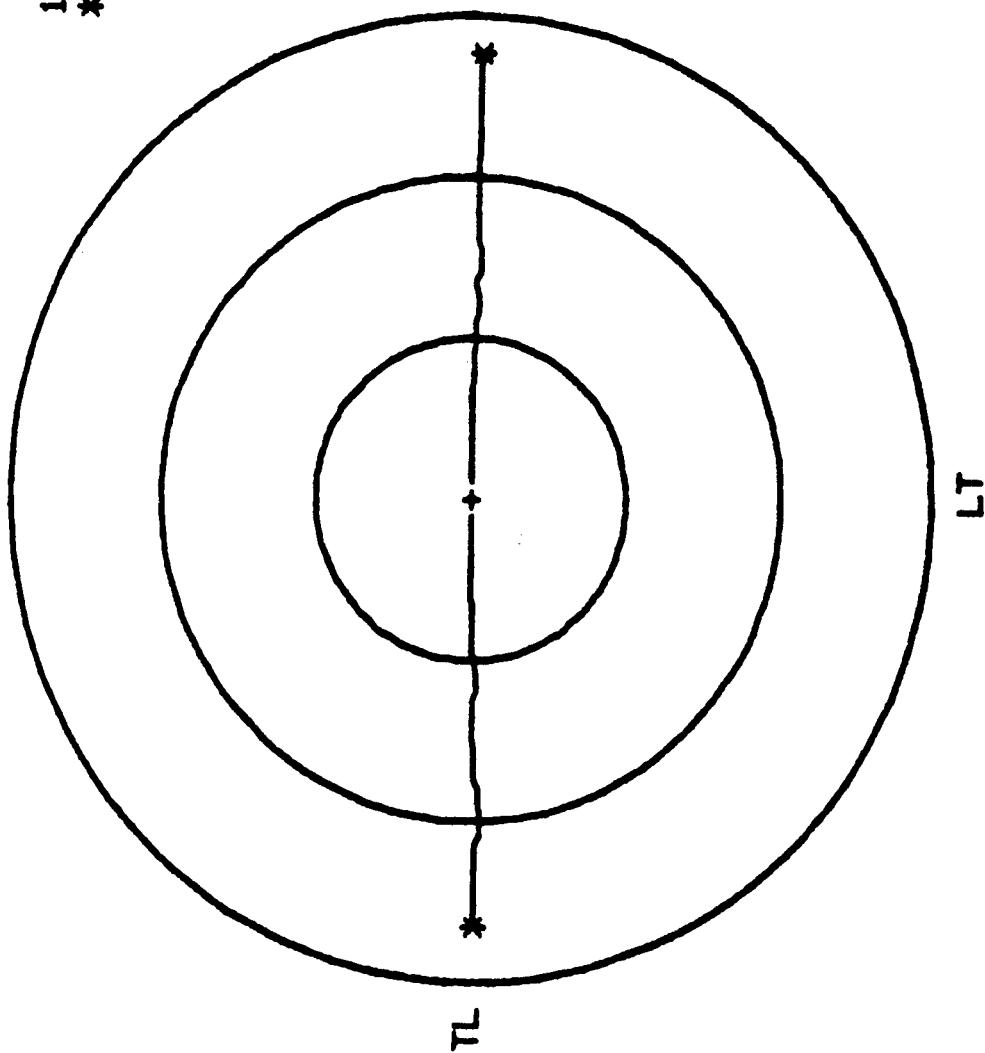
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	23.96	12.42	109630	40	42.1	182	-1
52	23.96	12.42	110060	41	43.1	182	-1
53	23.96	12.42	110520	42	44.1	182	-1
54	23.96	12.42	110980	43	45.1	181	-1
55	23.96	12.42	111450	44	46.2	181	-1
56	23.96	12.42	111890	45	47.2	181	-1
57	23.96	12.42	112320	46	48.3	181	-1
58	23.96	12.42	112710	47	49.2	181	-1
59	23.96	12.42	113170	48	50.2	181	-1
60	23.96	12.42	113530	49	51.8	181	-1
61	23.96	12.42	113910	50	52.8	181	-1
62	23.96	12.42	114270	51	53.7	181	-1
63	23.96	12.42	114620	52	54.5	181	-1
64	23.96	12.42	114930	53	55.3	181	-1



SPECIMEN 7-106

TEST CASE 41

1 IN SPACING  
\* TEST STOPPED



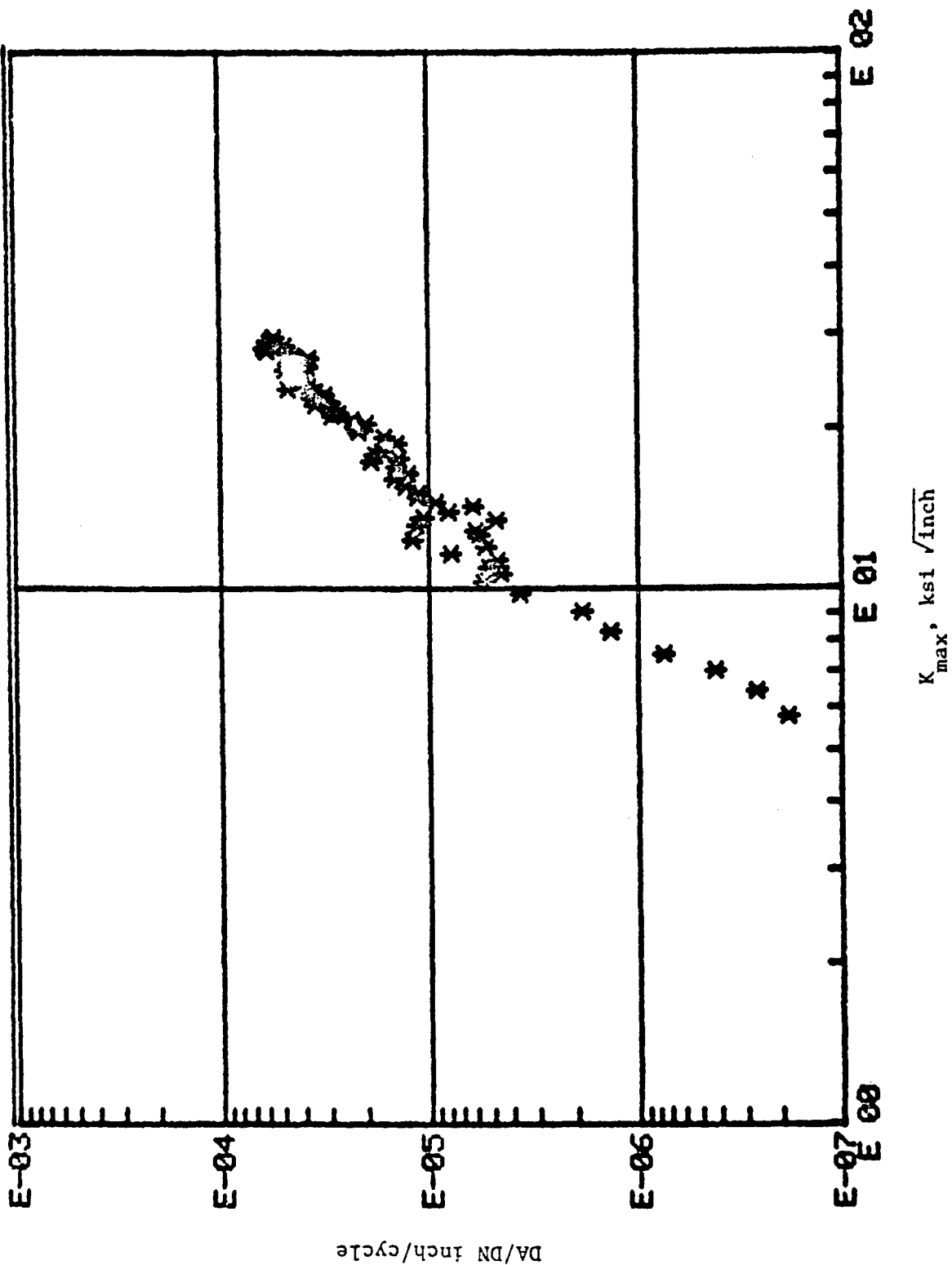
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CRACK GROWTH TEST OF 2024-T3 TEST CASE 43 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-12 FLAW TYPE - 1  
TEMP = 74 F REL HUM = 53 % 3-29-78  
B = .176 IN R(L) = .1 R(T) = .1  
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN  
BIAXIAL RATIO = 1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	20.23	20.17	0	2	1.8	184	-3
2	20.23	20.17	134690	2.5	2.3	182	-4
3	20.23	20.17	238810	3	2.9	181	-4
4	20.23	20.17	291540	3.5	3.3	180	-4
5	20.23	20.17	324670	4	3.8	180	-4
6	20.23	20.17	363230	5	4.9	179	-3
7	20.23	20.17	380680	5.5	5.7	178	-3
8	20.23	20.17	394260	6.5	6.7	178	-3
9	20.23	20.17	397890	7	7	178	-2
10	20.23	20.17	404030	7.5	7.6	178	-2
11	20.23	20.17	408360	8	8	178	-1
12	20.23	20.17	413720	8.5	8.5	178	-1
13	20.23	20.17	416920	9	9	178	-1
14	20.23	20.17	421610	9.5	9.5	178	-2
15	20.23	20.17	423720	10	10	178	-2
16	20.23	20.17	427620	10.5	10.4	178	-2
17	20.23	20.17	430540	11	10.6	178	-2
18	20.23	20.17	433390	11.5	11.4	177	-2
19	20.23	20.17	436530	12	11.5	177	-2
20	20.23	20.17	438650	12.5	11.9	176	-2
21	20.23	20.17	442040	13	12.5	176	-1
22	20.23	20.17	446090	13.5	13	176	-1
23	20.23	20.17	449580	14	13.8	177	-1
24	20.23	20.17	451780	14.5	14.3	177	-2
25	20.23	20.17	454470	15	15	178	-2
26	20.23	20.17	458910	16.1	16.2	178	-1
27	20.23	20.17	461830	17	17	179	-1
28	20.23	20.17	465400	18	17.8	179	-2
29	20.23	20.17	469710	19	18.7	180	-3
30	20.23	20.17	471100	20	19.5	181	-3
31	20.23	20.17	472800	20.3	19.7	181	-3
32	20.23	20.17	474030	21	20.5	181	-3
33	20.23	20.17	477350	22	21.7	181	-3
34	20.23	20.17	481880	23	23.3	181	-4
35	20.23	20.17	485700	24	24.9	180	-4
36	20.23	20.17	487790	25	25.6	180	-5
37	20.23	20.17	490310	26	26.9	180	-5
38	20.23	20.17	492460	27	27.5	179	-4
39	20.23	20.17	494600	28.2	28.3	178	-4
40	20.23	20.17	495910	29	29	178	-3
41	20.23	20.17	497480	30	29.6	178	-3
42	20.23	20.17	499170	31	30.6	178	-3
43	20.23	20.17	500690	32	31.7	177	-3
44	20.23	20.17	502250	33	32.6	177	-2
45	20.23	20.17	503770	34	33.8	177	-2
46	20.23	20.17	505840	35	34.4	177	-2
47	20.23	20.17	506330	36	35.2	177	-1
48	20.23	20.17	507400	37	36.2	177	-1
49	20.23	20.17	508540	38	36.9	177	-1
50	20.23	20.17	509750	39	37.9	177	-1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	20.23	20.17	510890	40	38.8	176	-1
52	20.23	20.17	511820	41	39.4	176	-1
53	20.23	20.17	512840	42	40.1	176	-1
54	20.23	20.17	513960	43	41	176	-1
55	20.23	20.17	514890	44	41.8	176	-1
56	20.23	20.17	515890	45	42.3	176	-1
57	20.23	20.17	516800	46	43	176	-1
58	20.23	20.17	518020	47	43.9	176	-1
59	20.23	20.17	519160	48	44.9	176	-2
60	20.23	20.17	520170	49	45.4	176	-2
61	20.23	20.17	521190	50	46.2	176	-2
62	20.23	20.17	522360	51	47.4	176	-3
63	20.23	20.17	523170	52	48.3	176	-3
64	20.23	20.17	524120	53	49.6	176	-3
65	20.23	20.17	525190	54	50.7	176	-3
66	20.23	20.17	526270	55	52	176	-3
67	20.23	20.17	527450	56	53.7	176	-3
68	20.23	20.17	528600	57	55.2	176	-4

# TEST CASE 43

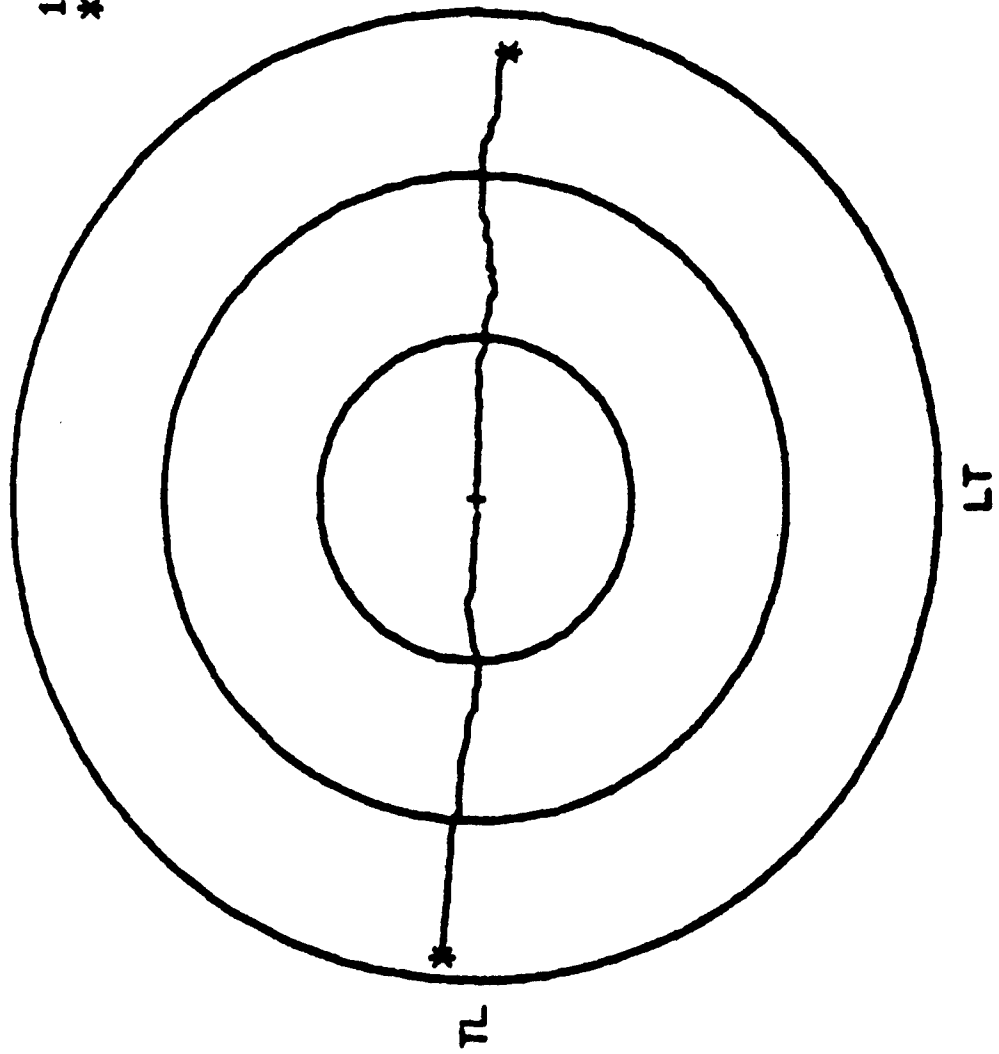
## SPECIMEN 2-12



SPECIMEN 2-12

TEST CASE 43

1 IN SPACING  
\* TEST STOPPED

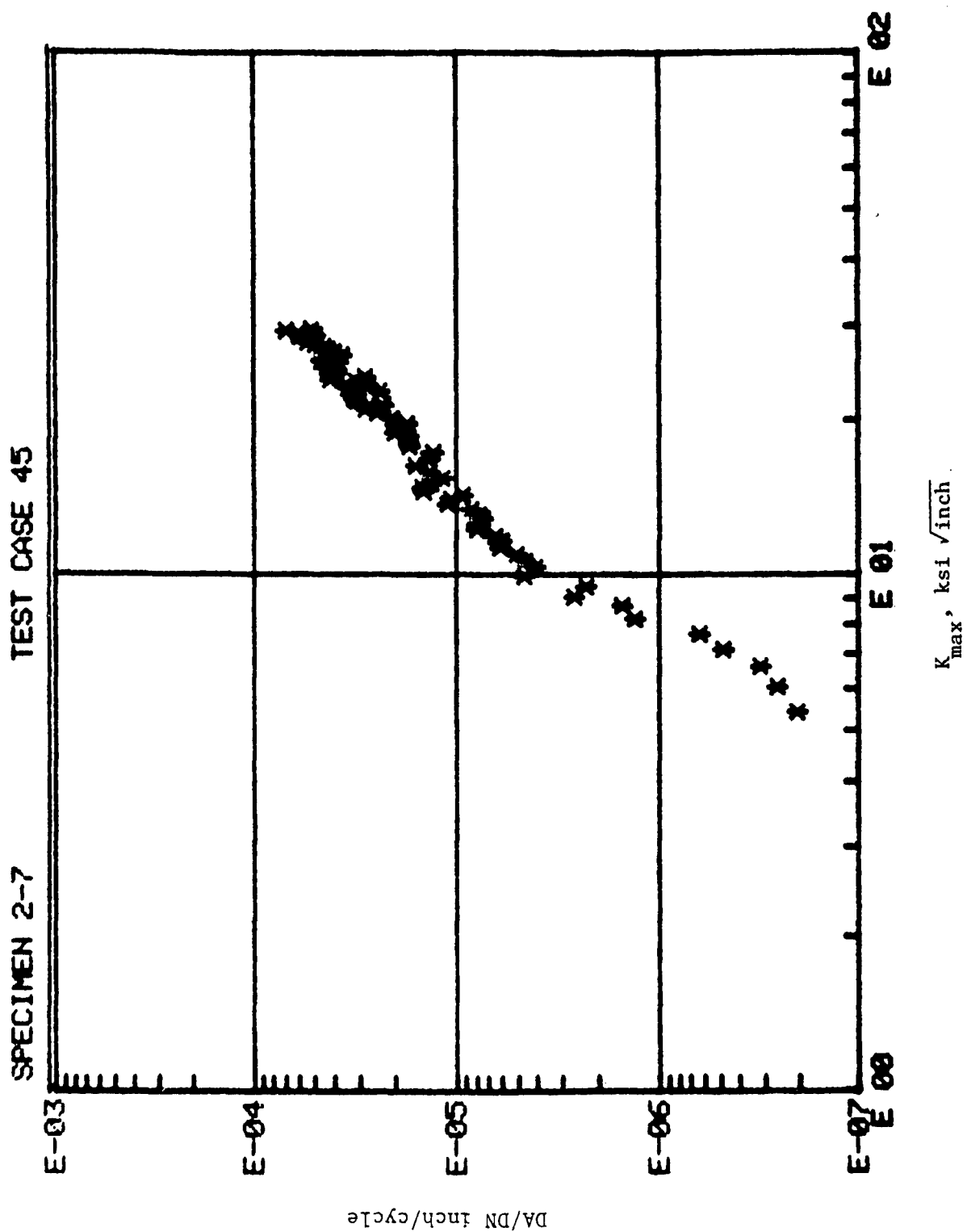




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CRACK GROWTH TEST OF 2024-T3 TEST CASE 45 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC 2-7 FLAW TYPE - 1  
TEMP = 74 F REL HUM = 60 % 4-10-78  
B = .174 IN R(L) = .1 R(T) = .1  
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	19.97	10.35	0	1.6	1.8	180	0
2	19.97	10.35	97540	2	2.2	180	0
3	19.97	10.35	193710	2.5	2.7	180	0
4	19.97	10.35	264950	3	3.1	180	0
5	19.97	10.35	311500	3.5	3.5	180	0
6	19.97	10.35	351060	4	4	180	0
7	19.97	10.35	377760	4.7	4.7	180	0
8	19.97	10.35	387700	5	5	180	0
9	19.97	10.35	398270	5.5	5.6	180	0
10	19.97	10.35	408010	6	6	180	0
11	19.97	10.35	415020	6.6	6.7	179	0
12	19.97	10.35	419350	7	7	179	0
13	19.97	10.35	425340	7.5	7.6	179	0
14	19.97	10.35	429820	8	8	179	0
15	19.97	10.35	433950	8.5	8.5	179	0
16	19.97	10.35	437720	9	8.9	179	0
17	19.97	10.35	440850	9.5	9.2	178	-1
18	19.97	10.35	444610	10	9.9	178	-2
19	19.97	10.35	447750	10.5	10.4	178	-2
20	19.97	10.35	451120	11	10.9	178	-2
21	19.97	10.35	454040	11.5	11.3	178	-2
22	19.97	10.35	457600	12	12	178	-2
23	19.97	10.35	459860	12.5	12.5	178	-2
24	19.97	10.35	462000	13	12.9	179	-2
25	19.97	10.35	465230	13.5	13.6	178	-2
26	19.97	10.35	466600	14	13.9	178	-2
27	19.97	10.35	469300	14.5	14.4	178	-3
28	19.97	10.35	470000	15	14.8	178	-3
29	19.97	10.35	474290	16	15.3	177	-3
30	19.97	10.35	477600	17	16.6	177	-3
31	19.97	10.35	480910	18	17.7	177	-4
32	19.97	10.35	484560	19	18.7	177	-4
33	19.97	10.35	489000	20.2	19.8	178	-4
34	19.97	10.35	491370	21	20.6	178	-3
35	19.97	10.35	493980	22	21.4	179	-3
36	19.97	10.35	496450	23	22.1	179	-3
37	19.97	10.35	498560	24	22.8	179	-3
38	19.97	10.35	500980	25	23.7	180	-3
39	19.97	10.35	504110	26	24.9	179	-3
40	19.97	10.35	507240	27.1	26.4	179	-4
41	19.97	10.35	509170	28	27.4	179	-4
42	19.97	10.35	510970	29	28.4	178	-4
43	19.97	10.35	513050	30	29.3	179	-4
44	19.97	10.35	514670	31	30.3	179	-4
45	19.97	10.35	516090	32	31.1	179	-4
46	19.97	10.35	517600	33	32	179	-4
47	19.97	10.35	519480	34	32.9	179	-4
48	19.97	10.35	520800	35	33.6	180	-4
49	19.97	10.35	522550	36	34.5	180	-3
50	19.97	10.35	523760	37	35	180	-2

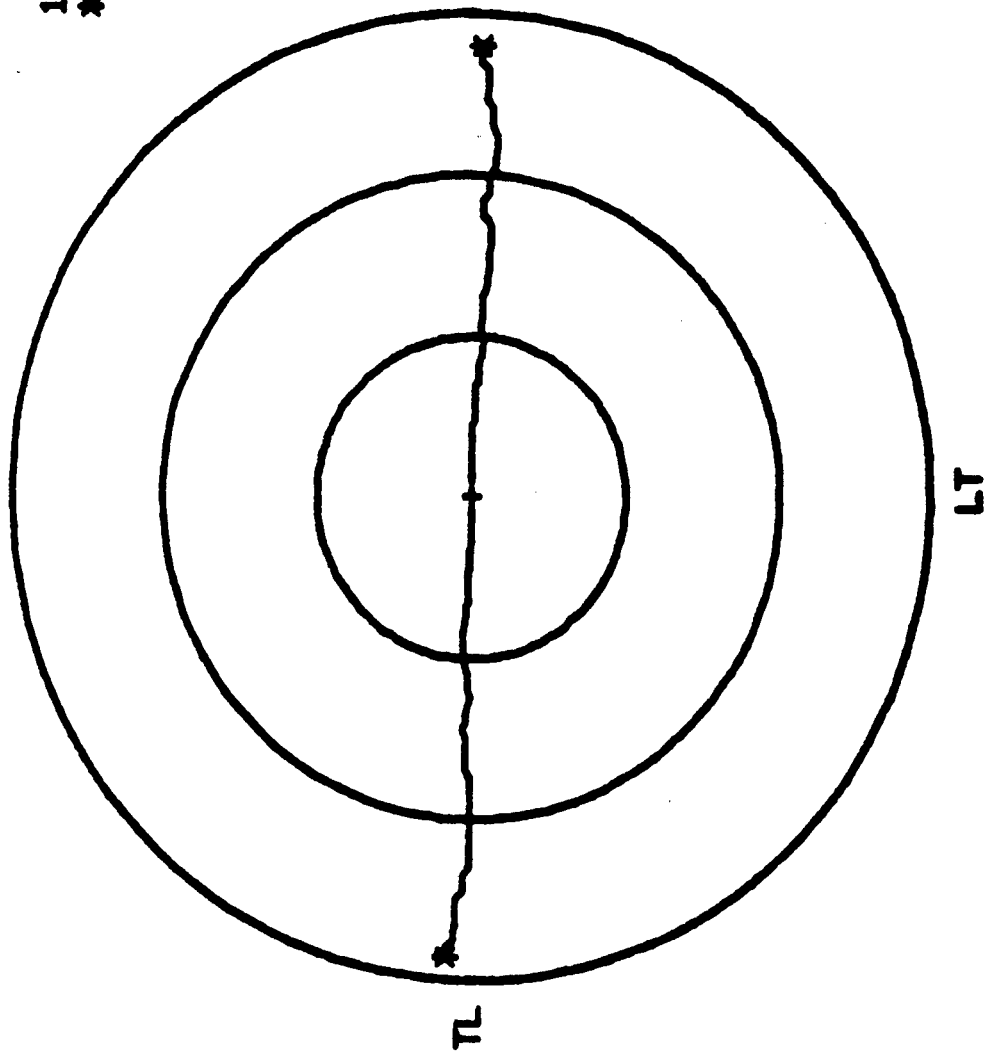
REF	P(L)	P(T)	TOTAL	GRID	GRID	ANGLE	ANGLE
#	KIPS	KIPS	CYCLES	LEFT	RIGHT	LEFT	RIGHT
51	19.97	10.35	524960	38	36	180	-2
52	19.97	10.35	526560	39	36.8	180	-2
53	19.97	10.35	527790	40	37.7	180	-3
54	19.97	10.35	529150	41	38.8	180	-3
55	19.97	10.35	530410	42	40	180	-3
56	19.97	10.35	531670	43	41.1	180	-4
57	19.97	10.35	532860	44	42.3	180	-4
58	19.97	10.35	534240	45	43.6	180	-4
59	19.97	10.35	535810	46	44.9	180	-4
60	19.97	10.35	537180	47	46.1	179	-3
61	19.97	10.35	538280	48	47	179	-3
62	19.97	10.35	539560	49	48.3	179	-3
63	19.97	10.35	540570	50	49.3	178	-2
64	19.97	10.35	541590	51	50.5	178	-2
65	19.97	10.35	542670	52.1	51.7	178	-2
66	19.97	10.35	543520	53.2	52.6	178	-2
67	19.97	10.35	544180	54	53.1	178	-2
68	19.97	10.35	544980	55	54	178	-1
69	19.97	10.35	545710	56	55	177	-1
70	19.97	10.35	546630	57	55.9	177	-1



SPECIMEN 2-7

TEST CASE 45

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 94 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-59 FLAW TYPE - I  
TEMP = 74 F REL HUM = 59% 02-03-78  
B = .178 IN R(L) = .7 R(T) = .7  
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN  
BIAXIAL RATIO = 1  
-----

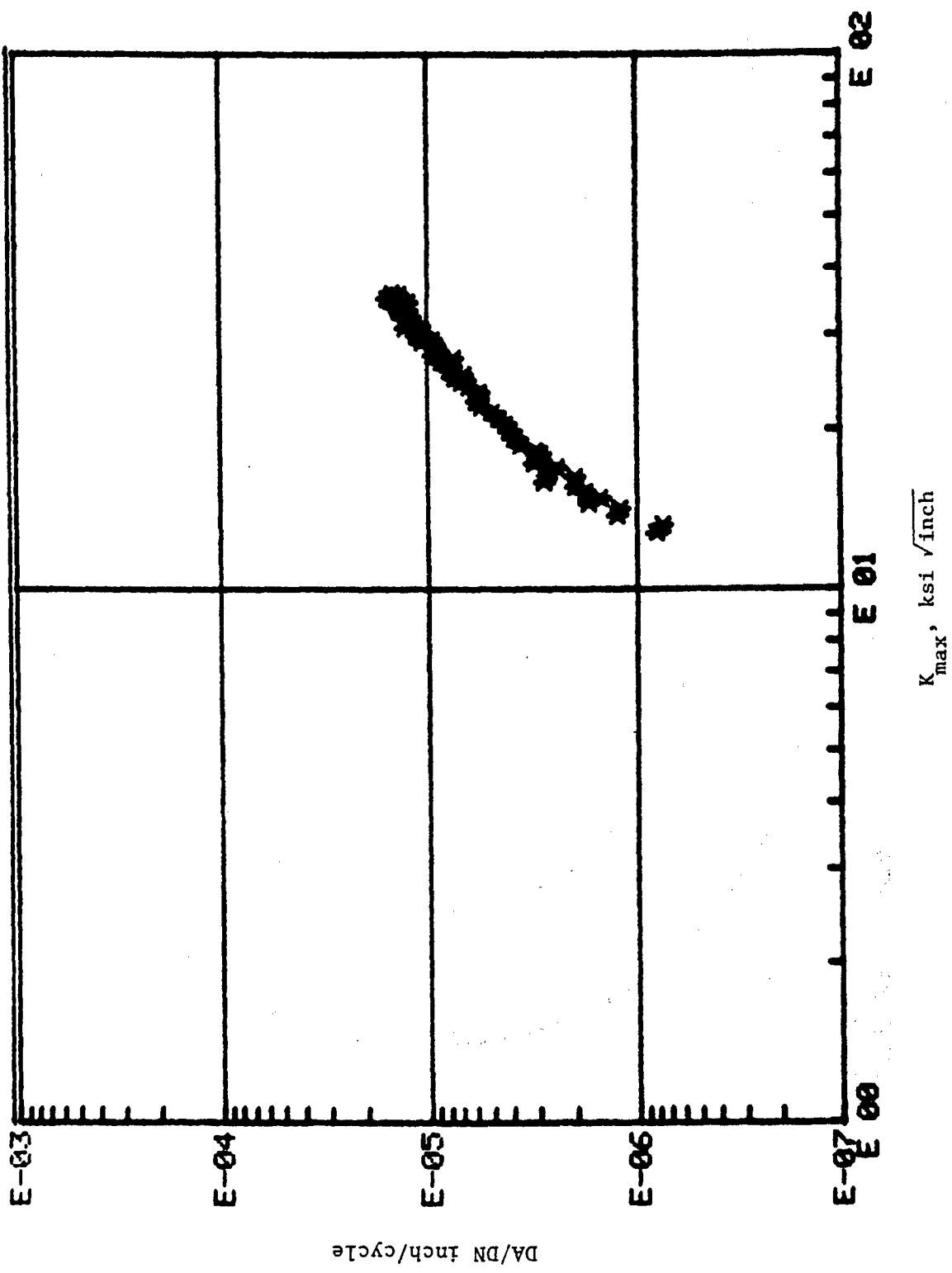
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	28.01	27.99	0	7	7	178	0
2	28.01	27.99	40130	7.5	7.8	178	-1
3	28.01	27.99	66490	8	8.1	178	-1
4	28.01	27.99	96680	8.7	8.9	178	-1
5	28.01	27.99	109100	9	9.2	178	-1
6	28.01	27.99	125180	9.5	9.8	178	-1
7	28.01	27.99	140190	10	10.2	178	-1
8	28.01	27.99	154360	10.5	10.7	178	-1
9	28.01	27.99	167010	11	11.2	178	-1
10	28.01	27.99	176090	11.5	11.7	178	-1
11	28.01	27.99	187340	12	12.1	178	-1
12	28.01	27.99	197910	12.5	12.7	178	-1
13	28.01	27.99	207120	13	13.1	178	-1
14	28.01	27.99	215190	13.5	13.6	178	-1
15	28.01	27.99	223730	14	14.1	178	-2
16	28.01	27.99	233300	14.5	14.7	178	-2
17	28.01	27.99	239810	15	15	178	-2
18	28.01	27.99	253700	16	16	178	-2
19	28.01	27.99	266770	17	17	178	-2
20	28.01	27.99	279010	18	18	178	-2
21	28.01	27.99	290770	19	19	178	-2
22	28.01	27.99	301780	20	20	178	-2
23	28.01	27.99	312050	21	21	178	-2
24	28.01	27.99	321170	22	22	178	-2
25	28.01	27.99	329780	23	23	178	-2
26	28.01	27.99	338560	24	24	178	-2
27	28.01	27.99	346920	25	24.9	178	-2
28	28.01	27.99	355180	26	26	178	-2
29	28.01	27.99	362410	27	27	178	-2
30	28.01	27.99	369180	28	28	178	-2
31	28.01	27.99	376610	29	29	178	-2
32	28.01	27.99	382950	30	30	178	-2
33	28.01	27.99	389210	31	30.9	178	-2
34	28.01	27.99	395390	32	32	178	-2
35	28.01	27.99	401730	33	32.9	178	-2
36	28.01	27.99	407060	34	33.9	178	-2
37	28.01	27.99	412720	35	34.9	178	-2
38	28.01	27.99	418270	36	35.9	178	-2
39	28.01	27.99	423810	37	37	178	-2
40	28.01	27.99	428310	38	37.9	178	-2
41	28.01	27.99	433630	39	38.9	178	-2
42	28.01	27.99	437880	40	39.8	178	-2
43	28.01	27.99	442940	41	40.9	178	-2
44	28.01	27.99	447370	42	41.9	178	-2
45	28.01	27.99	451510	43	43	178	-2
46	28.01	27.99	455850	44	44	178	-2
47	28.01	27.99	460020	45	45	178	-2
48	28.01	27.99	464060	46	46	178	-2
49	28.01	27.99	468270	47	47	178	-2
50	28.01	27.99	472390	48	48.1	178	-2

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	28.01	27.99	476440	49	49.3	178	-2
52	28.01	27.99	480090	50	50.3	178	-2
53	28.01	27.99	483880	51	51.3	178	-2
54	28.01	27.99	487520	52	52.3	178	-2
55	28.01	27.99	490950	53	53	178	-2
56	28.01	27.99	494630	54	54.2	178	-3
57	28.01	27.99	497860	55	55.2	178	-3
58	28.01	27.99	501140	56	56.1	178	-3
59	28.01	27.99	504620	57	57	178	-3
60	28.01	27.99	508200	58	58.1	178	-3



TEST CASE 94

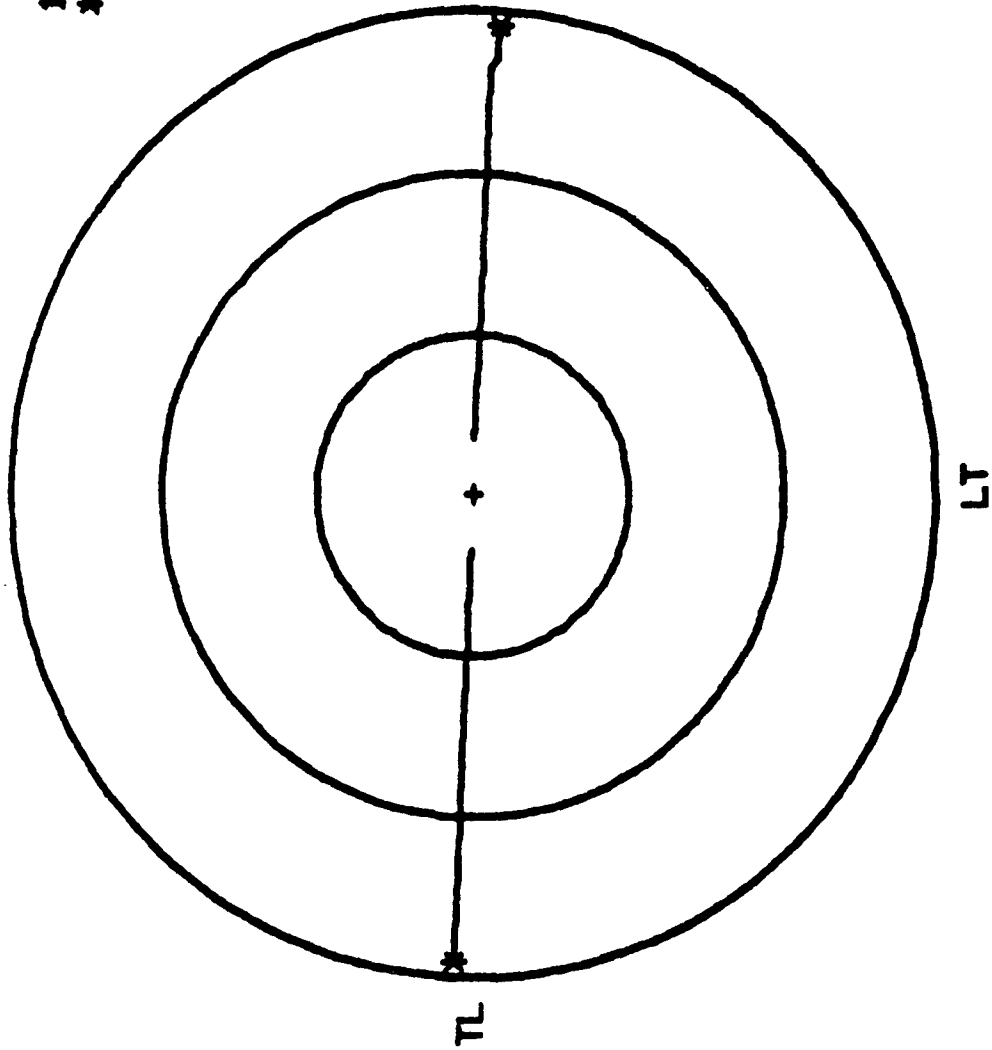
SPECIMEN 7-59



SPECIMEN 7-59

TEST CASE 94

1 IN SPACING  
\* TEST STOPPED



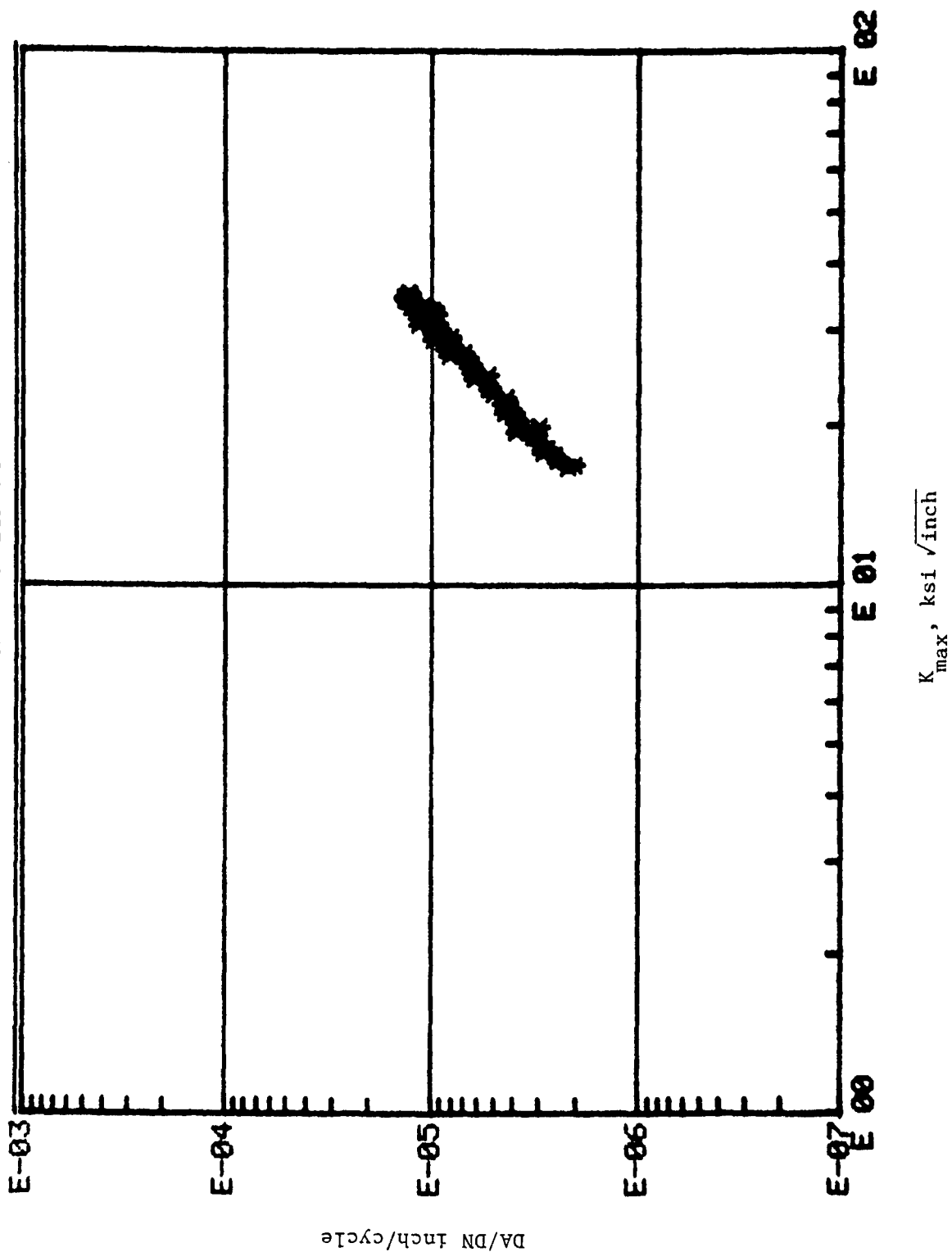
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CRACK GROWTH TEST OF 7075-T7 TEST CASE 72 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-116 FLAW TYPE - 1  
TEMP = 73 F REL HUM = 53 % 4-4-78  
B = .18 IN R(L) = .7 R(T) = .7  
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	25.8	16.2	0	12.3	12.4	179	-2
2	25.8	16.2	5690	12.5	12.7	179	-2
3	25.8	16.2	16610	13	13.1	179	-1
4	25.8	16.2	28730	13.6	13.7	179	-1
5	25.8	16.2	36660	14	14.1	179	-1
6	25.8	16.2	45310	14.5	14.6	179	-1
7	25.8	16.2	52590	14.9	15	179	-1
8	25.8	16.2	70830	16	16.1	180	-1
9	25.8	16.2	81590	16.7	16.8	179	-1
10	25.8	16.2	84810	17	17	179	-1
11	25.8	16.2	92040	17.5	17.6	179	-1
12	25.8	16.2	99460	18	18	180	-1
13	25.8	16.2	107740	18.6	18.7	179	-1
14	25.8	16.2	112940	19	19.1	179	-1
15	25.8	16.2	119140	19.5	19.6	179	-1
16	25.8	16.2	124200	20	20	179	-1
17	25.8	16.2	136320	21	21	179	-1
18	25.8	16.2	147260	22	22	179	-1
19	25.8	16.2	158100	23	22.9	179	-1
20	25.8	16.2	167970	24	23.9	179	-1
21	25.8	16.2	177320	25	24.9	179	-1
22	25.8	16.2	186530	26	25.9	179	-1
23	25.8	16.2	194100	27	26.8	179	-2
24	25.8	16.2	202480	28	27.6	179	-2
25	25.8	16.2	210490	29	28.6	179	-2
26	25.8	16.2	217650	30	29.5	179	-2
27	25.8	16.2	225010	31	30.4	179	-2
28	25.8	16.2	232140	32	31.3	179	-2
29	25.8	16.2	238260	33	32.3	179	-2
30	25.8	16.2	244660	34	33.1	179	-2
31	25.8	16.2	250540	35	34.1	179	-2
32	25.8	16.2	256570	36	35	179	-2
33	25.8	16.2	262720	37	36	179	-2
34	25.8	16.2	267810	38	37	179	-1
35	25.8	16.2	273690	39	37.9	179	-2
36	25.8	16.2	279020	40	39	179	-1
37	25.8	16.2	284300	41	39.9	179	-2
38	25.8	16.2	289290	42	40.8	179	-2
39	25.8	16.2	293830	43	41.9	179	-2
40	25.8	16.2	298400	44	42.7	179	-2
41	25.8	16.2	302910	45	43.6	179	-2
42	25.8	16.2	307640	46	44.7	179	-2
43	25.8	16.2	312420	47	45.5	179	-2
44	25.8	16.2	316560	48	46.5	179	-2
45	25.8	16.2	321870	49	47.6	179	-2
46	25.8	16.2	325590	50	48.5	179	-2
47	25.8	16.2	329500	51	49.4	179	-2
48	25.8	16.2	333690	52	50.2	179	-2
49	25.8	16.2	337500	53	51.1	179	-2
50	25.8	16.2	341030	54	52	179	-2

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	25.8	16.2	344550	55	52.9	179	-2
52	25.8	16.2	348450	56	53.9	179	-2
53	25.8	16.2	352100	57	54.8	179	-2

SPECIMEN 7-116

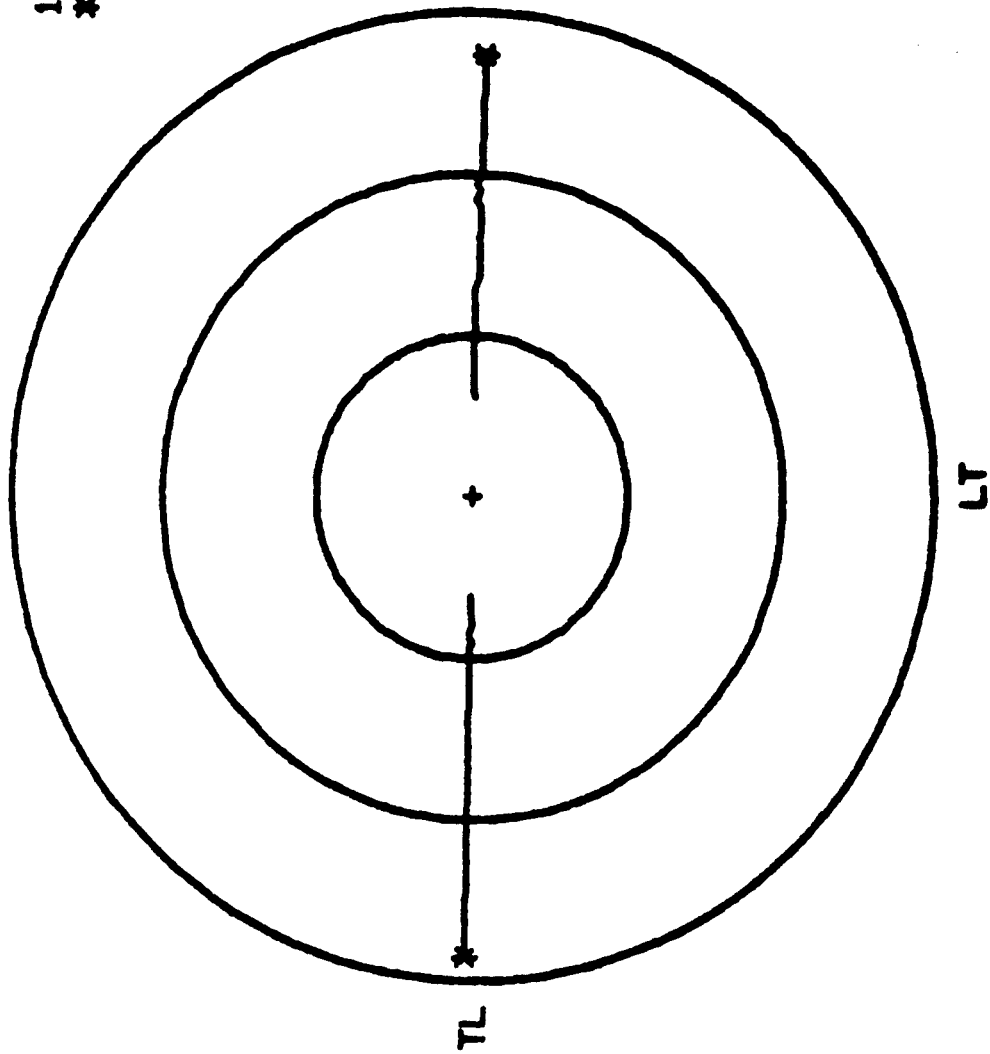
TEST CASE 72



SPECIMEN 7-116

TEST CASE 72

1 IN SPACING  
\* TEST STOPPED



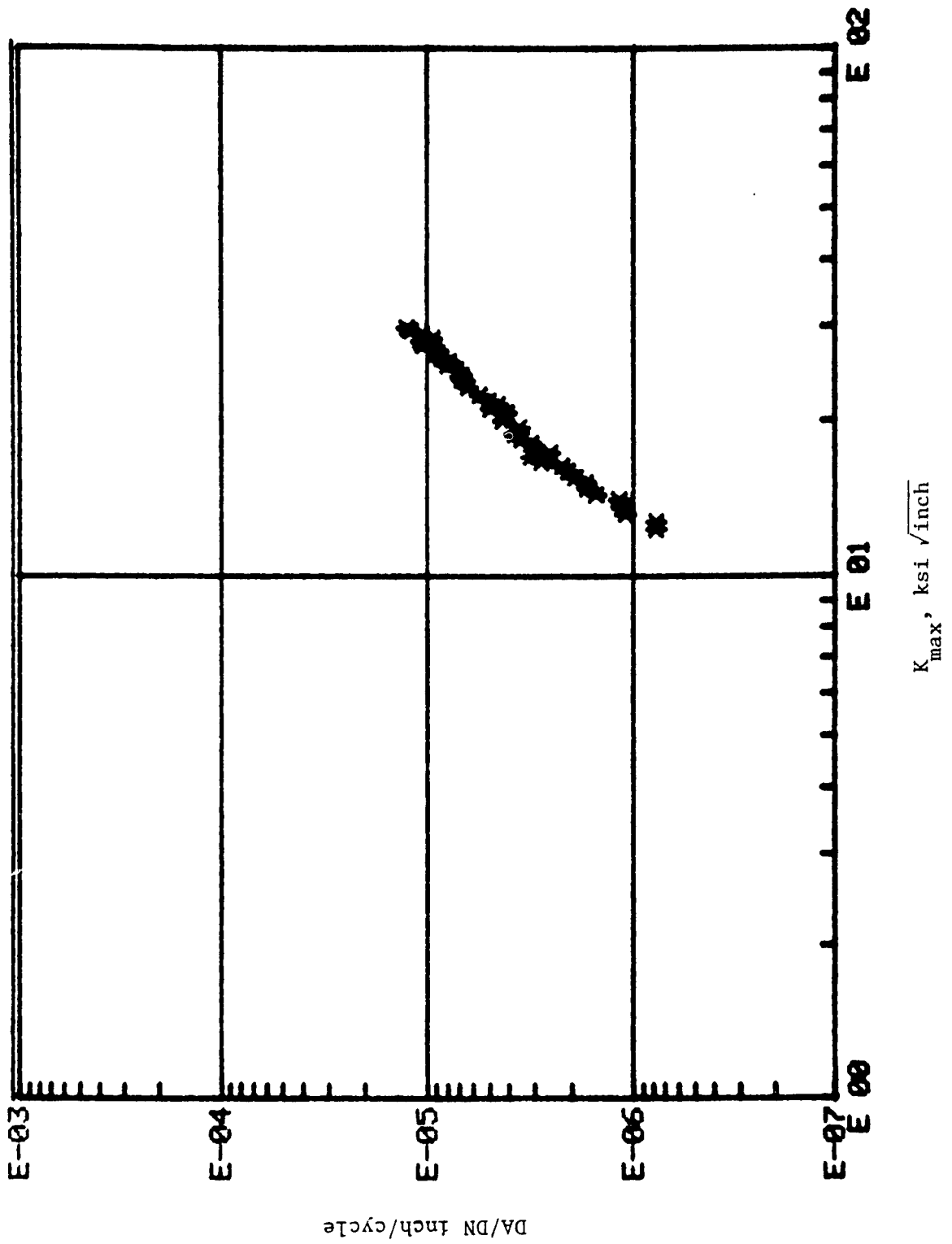
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CRACK GROWTH TEST OF 7075-T7 TEST CASE 42 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-42 FLAW TYPE - 1  
TEMP = 74 F REL HUM = 55 % 4-12-78  
B = .176 IN R(L) = .7 R(T) = .7  
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
-----



REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	21.47	-1.95	0	6.6	6.6	179	0
2	21.47	-1.95	25830	7	7	179	0
3	21.47	-1.95	64710	7.5	7.7	179	0
4	21.47	-1.95	83090	8	8	180	0
5	21.47	-1.95	109290	8.5	8.7	180	0
6	21.47	-1.95	128470	9	9.1	180	0
7	21.47	-1.95	146570	9.5	9.7	180	0
8	21.47	-1.95	158420	10	10	180	0
9	21.47	-1.95	175920	10.5	10.7	180	0
10	21.47	-1.95	189030	11	11.2	180	0
11	21.47	-1.95	203430	11.6	11.8	180	0
12	21.47	-1.95	213560	12	12.3	180	0
13	21.47	-1.95	222410	12.5	12.8	180	0
14	21.47	-1.95	230320	13	13.3	180	0
15	21.47	-1.95	242180	13.6	13.9	180	0
16	21.47	-1.95	249520	14	14.4	180	1
17	21.47	-1.95	259100	14.6	15	180	1
18	21.47	-1.95	267770	15.1	15.7	181	1
19	21.47	-1.95	279670	16	16.6	181	1
20	21.47	-1.95	292950	17	17.5	181	1
21	21.47	-1.95	305730	18	18.7	181	1
22	21.47	-1.95	318400	19	19.8	180	1
23	21.47	-1.95	324510	19.6	20.4	180	1
24	21.47	-1.95	329980	20	21	181	1
25	21.47	-1.95	339880	21	22	181	1
26	21.47	-1.95	351060	22.2	23.3	181	1
27	21.47	-1.95	366000	24	25.3	181	1
28	21.47	-1.95	374850	25.1	26.6	181	1
29	21.47	-1.95	381800	26	27.6	181	1
30	21.47	-1.95	389750	27.1	28.8	181	1
31	21.47	-1.95	395760	28	29.8	181	1
32	21.47	-1.95	403390	29.1	31.1	181	1
33	21.47	-1.95	408960	30	32.1	181	1
34	21.47	-1.95	414560	31	33.1	181	1
35	21.47	-1.95	420960	32	34.5	181	1
36	21.47	-1.95	425760	33	35.5	181	1
37	21.47	-1.95	431140	34	36.8	181	1
38	21.47	-1.95	436410	35	37.8	181	1
39	21.47	-1.95	442050	36	39.2	181	1
40	21.47	-1.95	446650	37	40.4	181	1
41	21.47	-1.95	451450	38	41.8	181	1

SPECIMEN 7-42

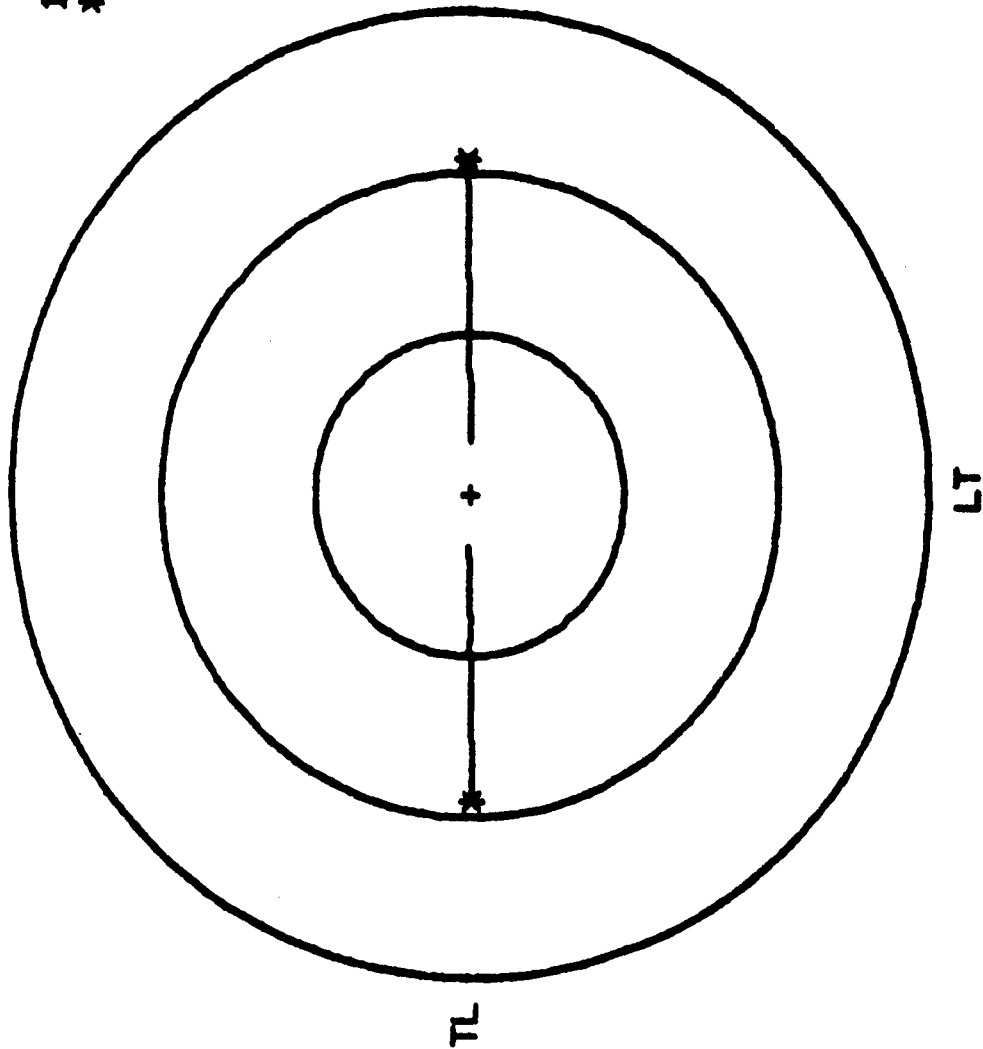
TEST CASE 42



SPECIMEN 7-42

TEST CASE 42

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 118 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-78 FLAW TYPE - 1

TEMP = 76 F REL HUM = 55 % 01-09-78

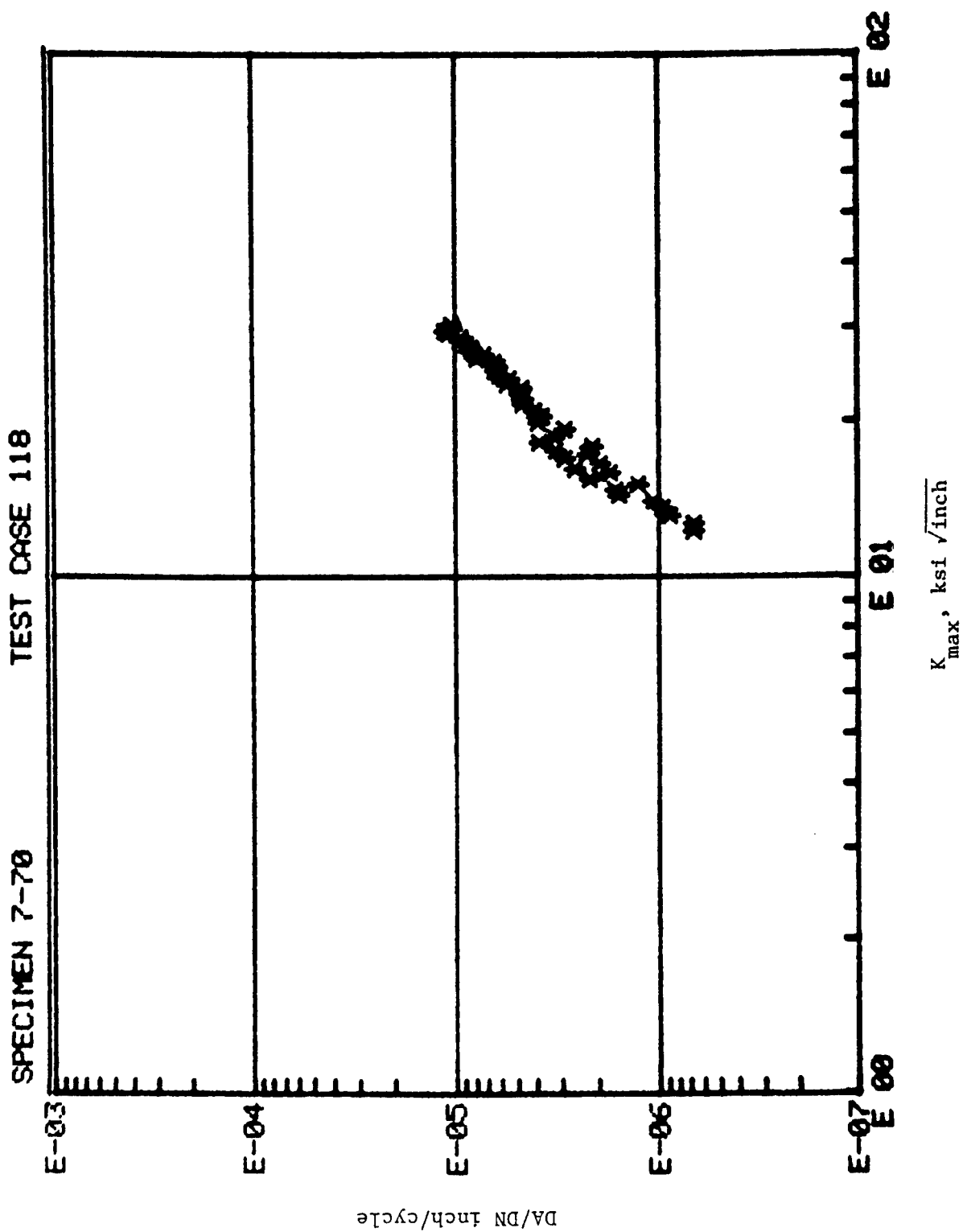
B = .183 IN R(L) = .7 R(T) = .7

FREQ = 15 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN

BIAXIAL RATIO = -1

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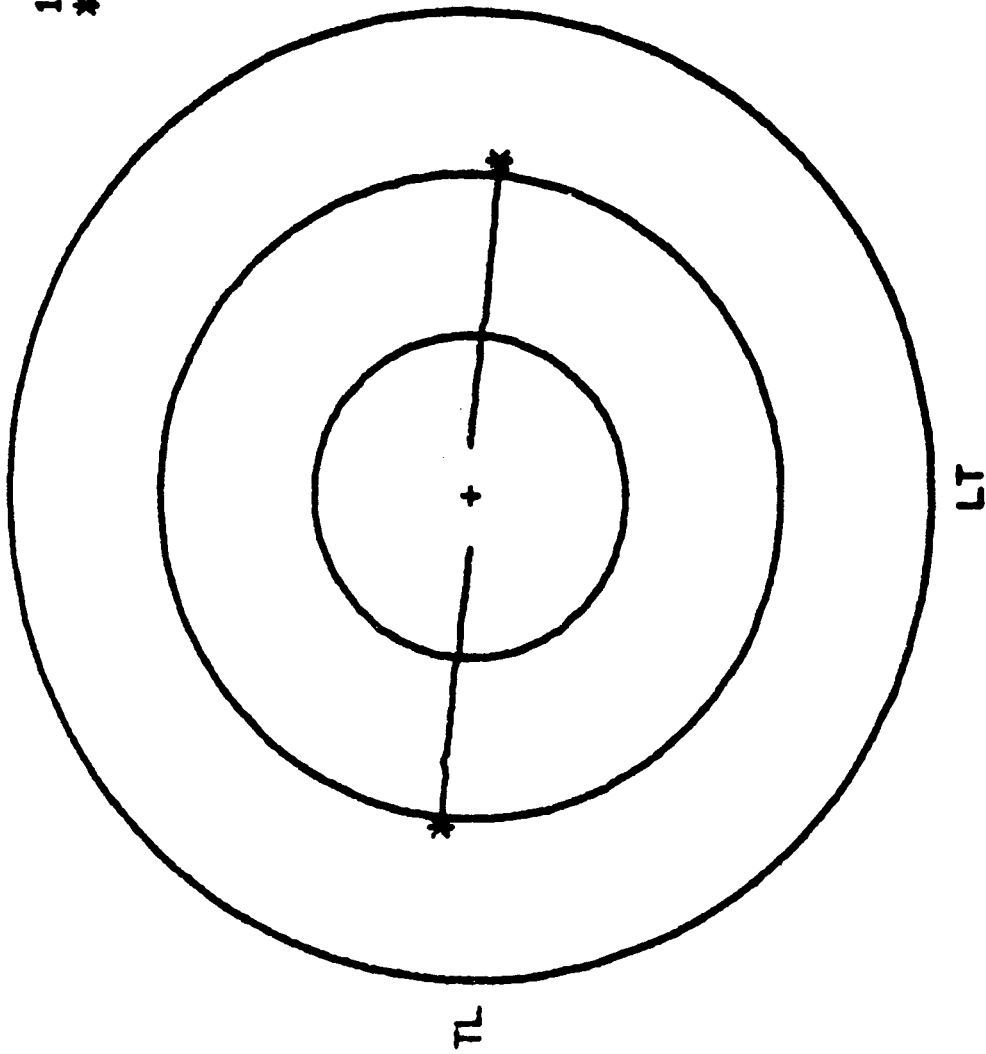
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	19.3	-19.3	0	6.5	6.4	180	0
2	19.3	-19.3	41120	7	7	180	0
3	19.3	-19.3	74680	7.5	7.4	179	-1
4	19.3	-19.3	105730	8	8	179	-1
5	19.3	-19.3	131670	8.5	8.5	179	-1
6	19.3	-19.3	155250	9	9	179	-1
7	19.3	-19.3	171320	9.5	9.5	178	-2
8	19.3	-19.3	186680	10	10	178	-2
9	19.3	-19.3	204400	10.5	10.4	178	-2
10	19.3	-19.3	217100	11	11	178	-2
11	19.3	-19.3	231660	11.5	11.5	177	-3
12	19.3	-19.3	241400	12	12	177	-3
13	19.3	-19.3	256990	12.6	12.6	177	-3
14	19.3	-19.3	263930	13	13	177	-3
15	19.3	-19.3	275170	13.5	13.5	177	-3
16	19.3	-19.3	283030	14	14	177	-3
17	19.3	-19.3	294940	14.5	14.5	176	-3
18	19.3	-19.3	301440	15	15	176	-3
19	19.3	-19.3	316900	16	16	176	-4
20	19.3	-19.3	334330	17	17	176	-4
21	19.3	-19.3	346500	18	17.9	176	-4
22	19.3	-19.3	359940	19	18.9	176	-4
23	19.3	-19.3	372300	20	19.9	176	-4
24	19.3	-19.3	383140	21	20.9	175	-4
25	19.3	-19.3	393920	22	21.9	175	-5
26	19.3	-19.3	404780	23	23	175	-5
27	19.3	-19.3	414870	24	23.9	175	-5
28	19.3	-19.3	423830	25	24.9	175	-5
29	19.3	-19.3	433490	26	26	175	-5
30	19.3	-19.3	441280	27	26.9	175	-5
31	19.3	-19.3	449230	28	27.9	175	-5
32	19.3	-19.3	457310	29	28.9	175	-5
33	19.3	-19.3	465510	30	30	175	-5
34	19.3	-19.3	471570	31	30.9	175	-5
35	19.3	-19.3	478900	32	32	175	-5
36	19.3	-19.3	485020	33	33	174	-5
37	19.3	-19.3	491330	34	34.1	175	-5
38	19.3	-19.3	497620	35	35.3	175	-5
39	19.3	-19.3	502600	36	36.2	175	-5
40	19.3	-19.3	508620	37	37.4	175	-5
41	19.3	-19.3	513970	38	38.7	175	-5
42	19.3	-19.3	518410	39	39.7	175	-5
43	19.3	-19.3	523300	40	40.7	175	-5
44	19.3	-19.3	528340	41	41.8	175	-5



SPECIMEN 7-70

TEST CASE 118

1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 2024-T3 TEST CASE 112 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-11 FLAW TYPE - 1

TEMP = 74 F REL HUM = 57 % 2-27-78

B = .18 IN R(L) = .7 R(T) = .7

FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN

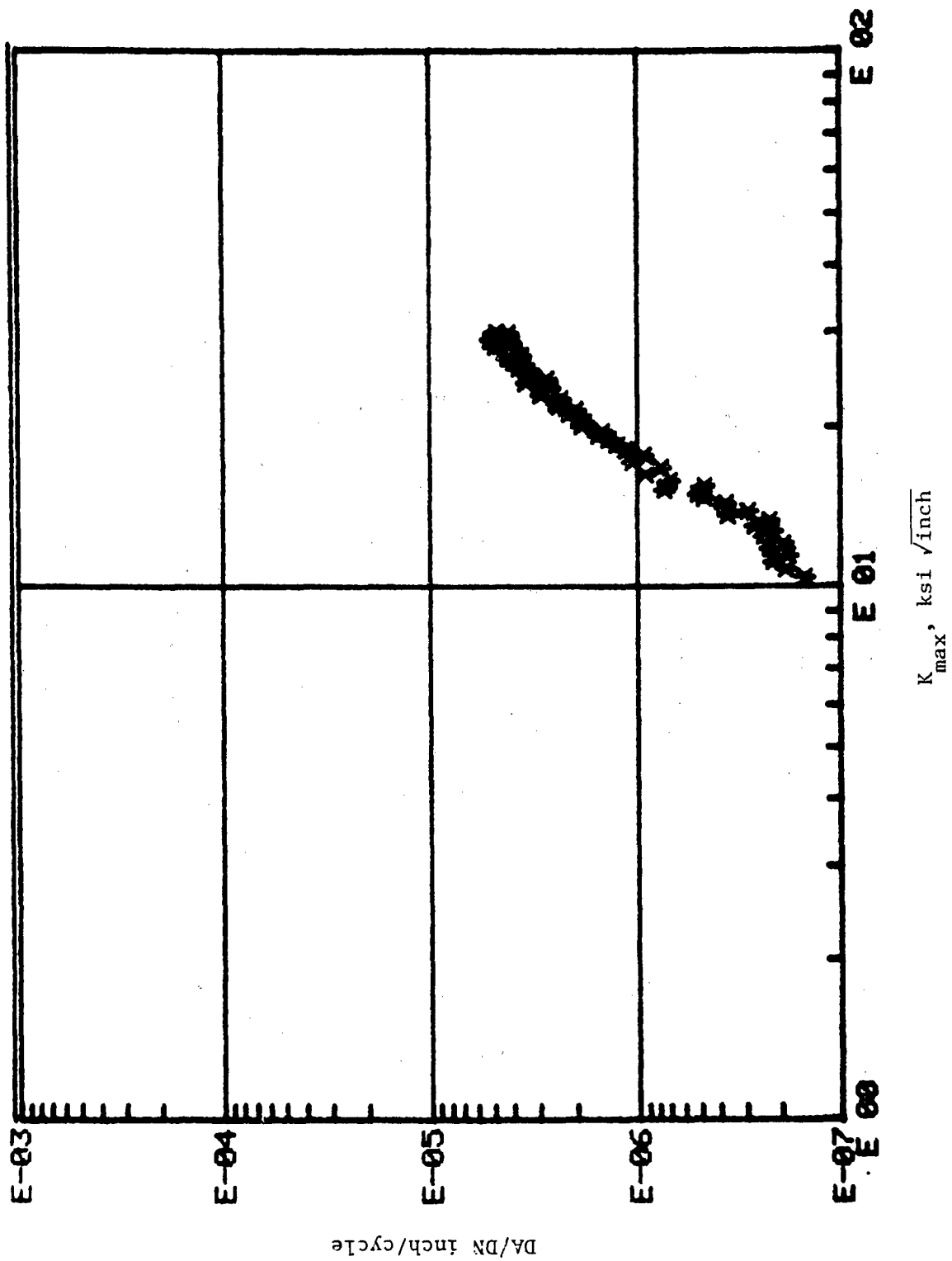
BIAXIAL RATIO = 1  
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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	23.34	23.32	0	6	7.4	179	-2
2	23.34	23.32	162900	6.5	7.9	178	-2
3	23.34	23.32	281820	7	8.3	178	-2
4	23.34	23.32	420440	7.5	9	178	-2
5	23.34	23.32	529450	8	9.3	178	-2
6	23.34	23.32	639690	8.5	9.8	178	-2
7	23.34	23.32	755630	9	10.2	178	-2
8	23.34	23.32	877840	9.5	10.9	178	-2
9	23.34	23.32	968820	10	11.2	178	-2
10	23.34	23.32	1.08034E+06	10.5	11.9	178	-2
11	23.34	23.32	1.19023E+06	11	12.4	178	-2
12	23.34	23.32	1.25911E+06	11.5	12.9	177	-2
13	23.34	23.32	1.31930E+06	12	13.1	177	-2
14	23.34	23.32	1.38510E+06	12.5	13.6	177	-2
15	23.34	23.32	1.44523E+06	13	14	178	-2
16	23.34	23.32	1.50289E+06	13.5	14.6	177	-2
17	23.34	23.32	1.56667E+06	14.2	15.2	177	-2
18	23.34	23.32	1.59036E+06	14.5	15.6	177	-2
19	23.34	23.32	1.64281E+06	15	16.1	178	-2
20	23.34	23.32	1.71720E+06	16.1	17.1	177	-2
21	23.34	23.32	1.76588E+06	17	18	177	-2
22	23.34	23.32	1.82740E+06	18	18.9	177	-2
23	23.34	23.32	1.87437E+06	19	19.9	177	-2
24	23.34	23.32	1.92759E+06	20	20.9	178	-2
25	23.34	23.32	1.97355E+06	21.1	21.9	178	-2
26	23.34	23.32	2.00720E+06	22	22.7	178	-2
27	23.34	23.32	2.04361E+06	23	23.7	178	-2
28	23.34	23.32	2.07442E+06	24	24.6	177	-2
29	23.34	23.32	2.10512E+06	25	25.4	177	-2
30	23.34	23.32	2.13357E+06	26	26.5	178	-2
31	23.34	23.32	2.16150E+06	27	27.5	177	-2
32	23.34	23.32	2.18386E+06	28	28.2	178	-2
33	23.34	23.32	2.20597E+06	29	29.1	178	-2
34	23.34	23.32	2.22997E+06	30	30	178	-2
35	23.34	23.32	2.24974E+06	31	30.9	178	-2
36	23.34	23.32	2.27009E+06	32	31.9	178	-2
37	23.34	23.32	2.29144E+06	33	32.9	177	-2
38	23.34	23.32	2.30849E+06	34	33.9	177	-2
39	23.34	23.32	2.32619E+06	35	34.9	178	-2
40	23.34	23.32	2.34445E+06	36	35.8	178	-2
41	23.34	23.32	2.36296E+06	37	36.8	178	-3
42	23.34	23.32	2.37762E+06	38	37.8	177	-3
43	23.34	23.32	2.39512E+06	39.1	38.6	177	-3
44	23.34	23.32	2.40916E+06	40	39.5	177	-3
45	23.34	23.32	2.42403E+06	41	40.5	177	-3
46	23.34	23.32	2.43744E+06	42	41.3	178	-3
47	23.34	23.32	2.45008E+06	43	42.2	178	-3
48	23.34	23.32	2.46711E+06	44.2	43.4	178	-3
49	23.34	23.32	2.47618E+06	45	44	178	-3
50	23.34	23.32	2.48874E+06	46	45	178	-3

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	23.34	23.32	2.50017E+06	47	45.9	178	-3
52	23.34	23.32	2.51742E+06	48.2	47.2	177	-3
53	23.34	23.32	2.53814E+06	50	49	177	-3
54	23.34	23.32	2.55013E+06	51	49.9	177	-3
55	23.34	23.32	2.55993E+06	52	50.8	177	-3
56	23.34	23.32	2.57239E+06	53	51.8	177	-3
57	23.34	23.32	2.58376E+06	54	52.9	178	-3
58	23.34	23.32	2.59304E+06	55	53.8	178	-3
59	23.34	23.32	2.60451E+06	56	54.8	177	-3
60	23.34	23.32	2.61511E+06	57	55.8	177	-3
61	23.34	23.32	2.62581E+06	58	56.6	177	-3
62	23.34	23.32	2.63584E+06	59	57.5	177	-3

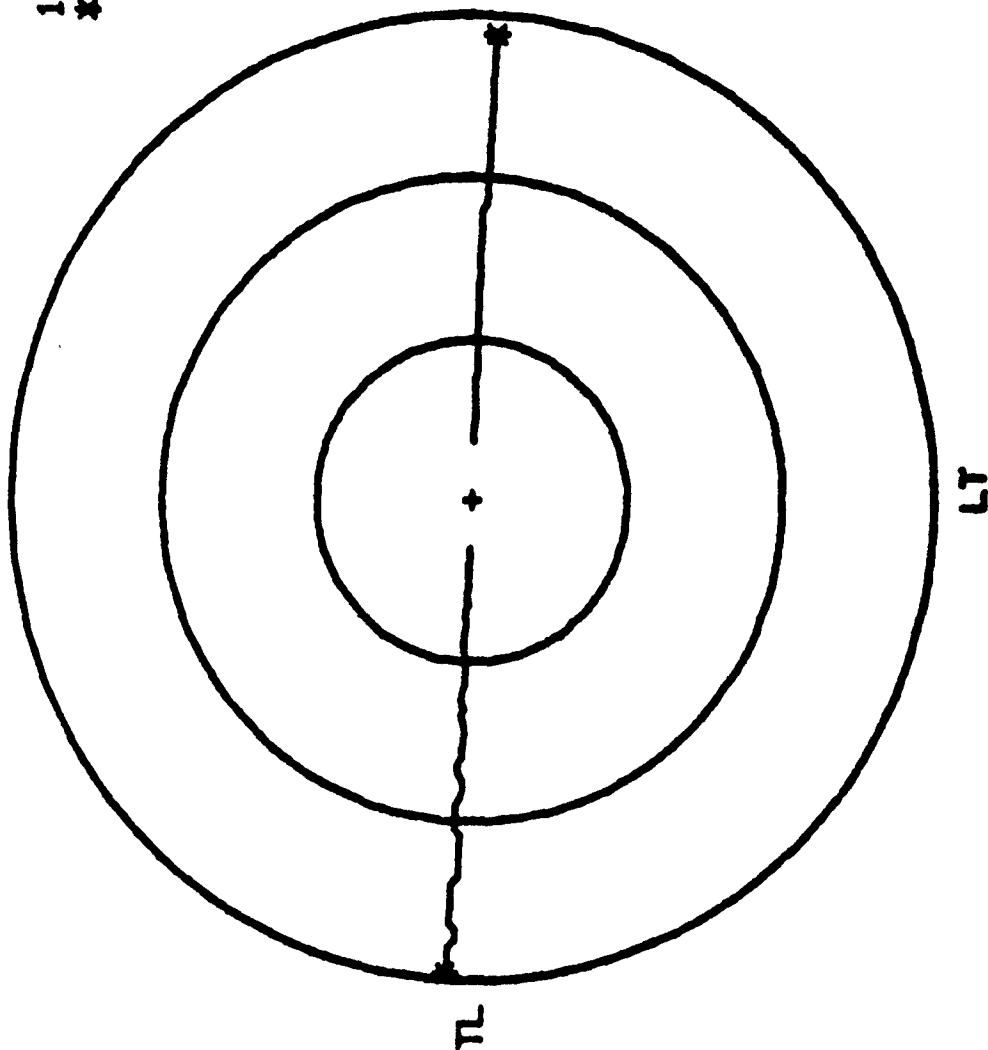
# SPECIMEN 2-11 TEST CASE 112



SPECIMEN 2-11

TEST CASE 112

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 106 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-30 FLAW TYPE - 1

TEMP = 76 F REL HUM = 46 % 3-9-78

B = .175 IN R(L) = .7 R(T) = .7

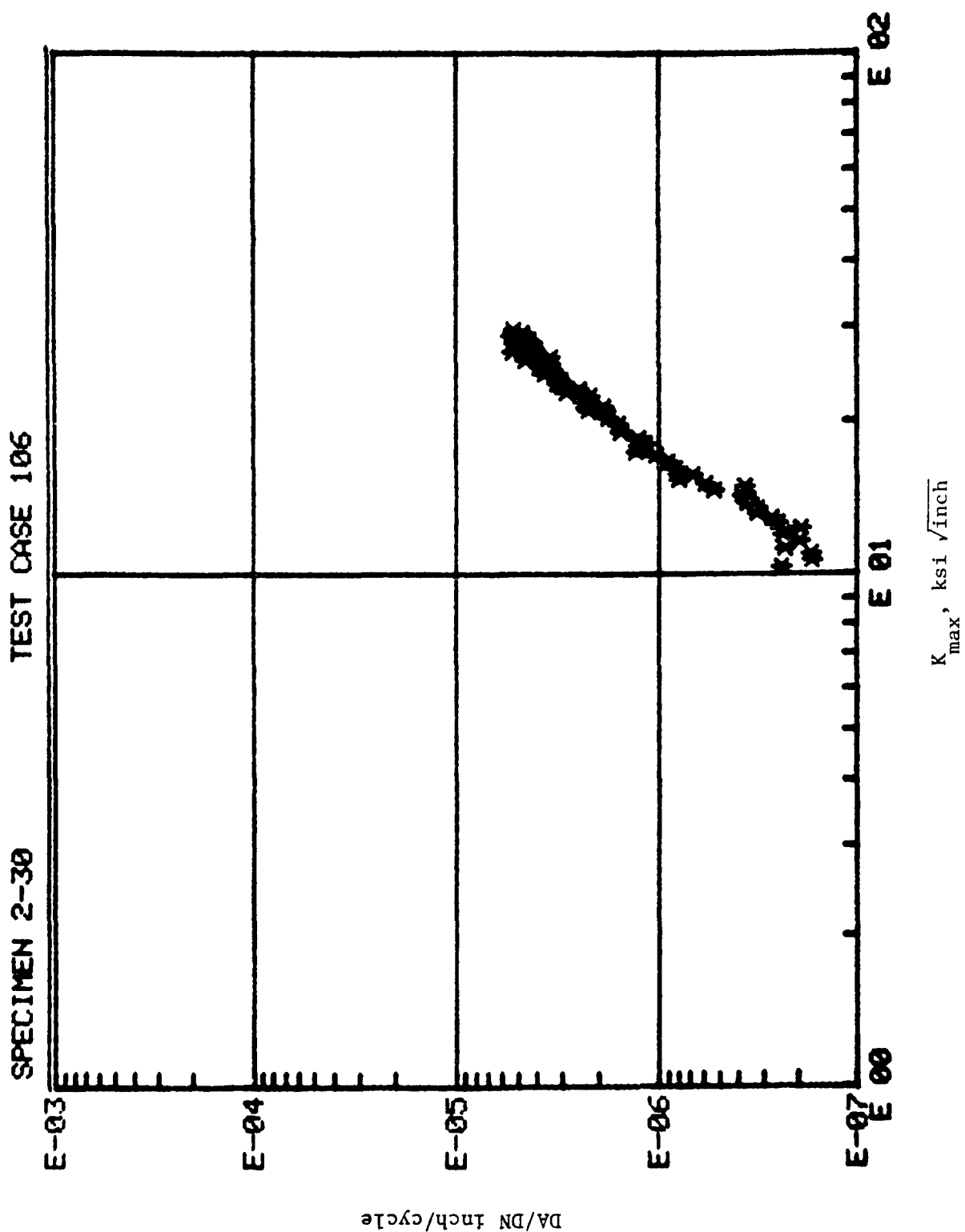
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN

BIAXIAL RATIO = .5

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REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	21.5	13.5	0	6.1	7	180	0
2	21.5	13.5	112780	6.6	7.6	180	0
3	21.5	13.5	214600	7	7.9	180	0
4	21.5	13.5	358480	7.5	8.4	180	-1
5	21.5	13.5	465880	8	8.9	180	-1
6	21.5	13.5	630550	8.6	9.6	180	-2
7	21.5	13.5	713800	9	10	180	-2
8	21.5	13.5	842630	9.5	10.5	179	-2
9	21.5	13.5	941190	10	11	179	-2
10	21.5	13.5	1.05138E+06	10.5	11.7	178	-2
11	21.5	13.5	1.11336E+06	11	12	178	-2
12	21.5	13.5	1.19813E+06	11.5	12.6	178	-2
13	21.5	13.5	1.25951E+06	12	13	178	-2
14	21.5	13.5	1.33567E+06	12.5	13.6	178	-2
15	21.5	13.5	1.39404E+06	13	14	178	-2
16	21.5	13.5	1.45046E+06	13.6	14.6	178	-3
17	21.5	13.5	1.51682E+06	14.2	15	178	-3
18	21.5	13.5	1.54211E+06	14.5	15.3	178	-3
19	21.5	13.5	1.58299E+06	15.1	16	178	-3
20	21.5	13.5	1.64482E+06	16	16.8	178	-3
21	21.5	13.5	1.70145E+06	17	17.7	177	-3
22	21.5	13.5	1.75647E+06	18	18.7	178	-3
23	21.5	13.5	1.80519E+06	19	19.7	178	-3
24	21.5	13.5	1.82825E+06	19.6	20.3	177	-3
25	21.5	13.5	1.84682E+06	20	20.8	177	-3
26	21.5	13.5	1.88914E+06	21	21.8	177	-3
27	21.5	13.5	1.92657E+06	22	22.7	177	-3
28	21.5	13.5	1.99349E+06	24	24.8	177	-4
29	21.5	13.5	2.02797E+06	25.1	25.9	177	-3
30	21.5	13.5	2.07756E+06	27	27.5	177	-4
31	21.5	13.5	2.10794E+06	28.3	28.9	177	-4
32	21.5	13.5	2.12660E+06	29	29.6	177	-4
33	21.5	13.5	2.16676E+06	31	31.4	177	-4
34	21.5	13.5	2.18827E+06	32	32.3	177	-4
35	21.5	13.5	2.20574E+06	33	33.3	177	-4
36	21.5	13.5	2.22611E+06	34	34.3	177	-4
37	21.5	13.5	2.24597E+06	35.2	35.5	177	-4
38	21.5	13.5	2.25699E+06	36	36.1	177	-4
39	21.5	13.5	2.27425E+06	37	37.2	177	-4
40	21.5	13.5	2.29127E+06	38.1	38.3	176	-4
41	21.5	13.5	2.30357E+06	39	39.2	176	-4
42	21.5	13.5	2.32083E+06	40.1	40.4	177	-4
43	21.5	13.5	2.33305E+06	41	41.4	177	-4
44	21.5	13.5	2.34759E+06	42.1	42.3	176	-4
45	21.5	13.5	2.35852E+06	43	43.1	176	-4
46	21.5	13.5	2.36893E+06	44	44	176	-4
47	21.5	13.5	2.38361E+06	45	45	176	-4
48	21.5	13.5	2.39738E+06	46.1	46.1	176	-4
49	21.5	13.5	2.40588E+06	47	47	176	-4
50	21.5	13.5	2.42000E+06	48	48.3	176	-4

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	21.5	13.5	2.43104E+06	49	49.2	176	-4
52	21.5	13.5	2.44170E+06	50	50.1	176	-4
53	21.5	13.5	2.45194E+06	51	51.1	176	-4
54	21.5	13.5	2.46455E+06	52	52.3	176	-5
55	21.5	13.5	2.47469E+06	53	53.2	176	-5
56	21.5	13.5	2.48313E+06	54	54	177	-5
57	21.5	13.5	2.49384E+06	55	55	176	-5
58	21.5	13.5	2.50354E+06	56	56	177	-5

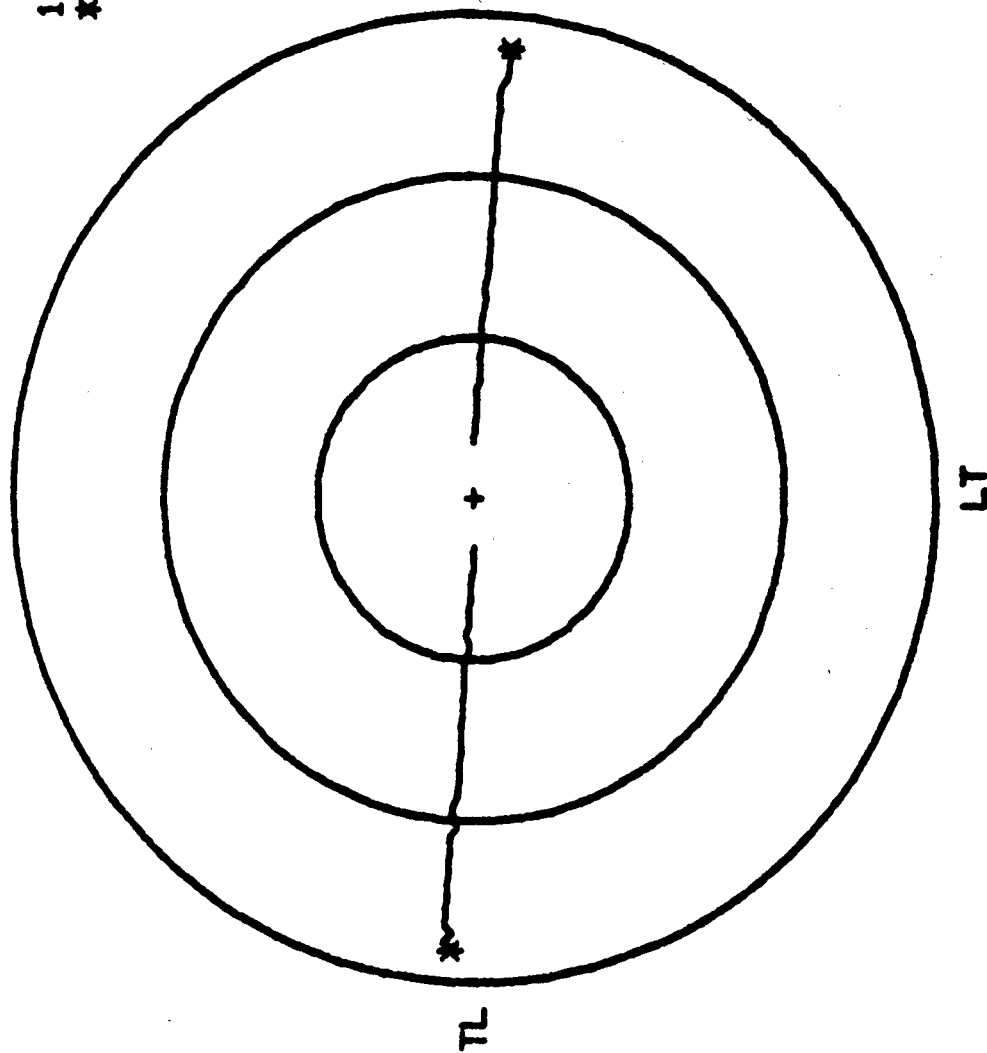




SPECIMEN 2-30

TEST CASE 106

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 2024-T3 TEST CASE 46 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 2-27 FLAW TYPE - 1

TEMP = 75 F REL HUM = 55 % 4-24-78

B = .178 IN R(L) = .7 R(T) = .7

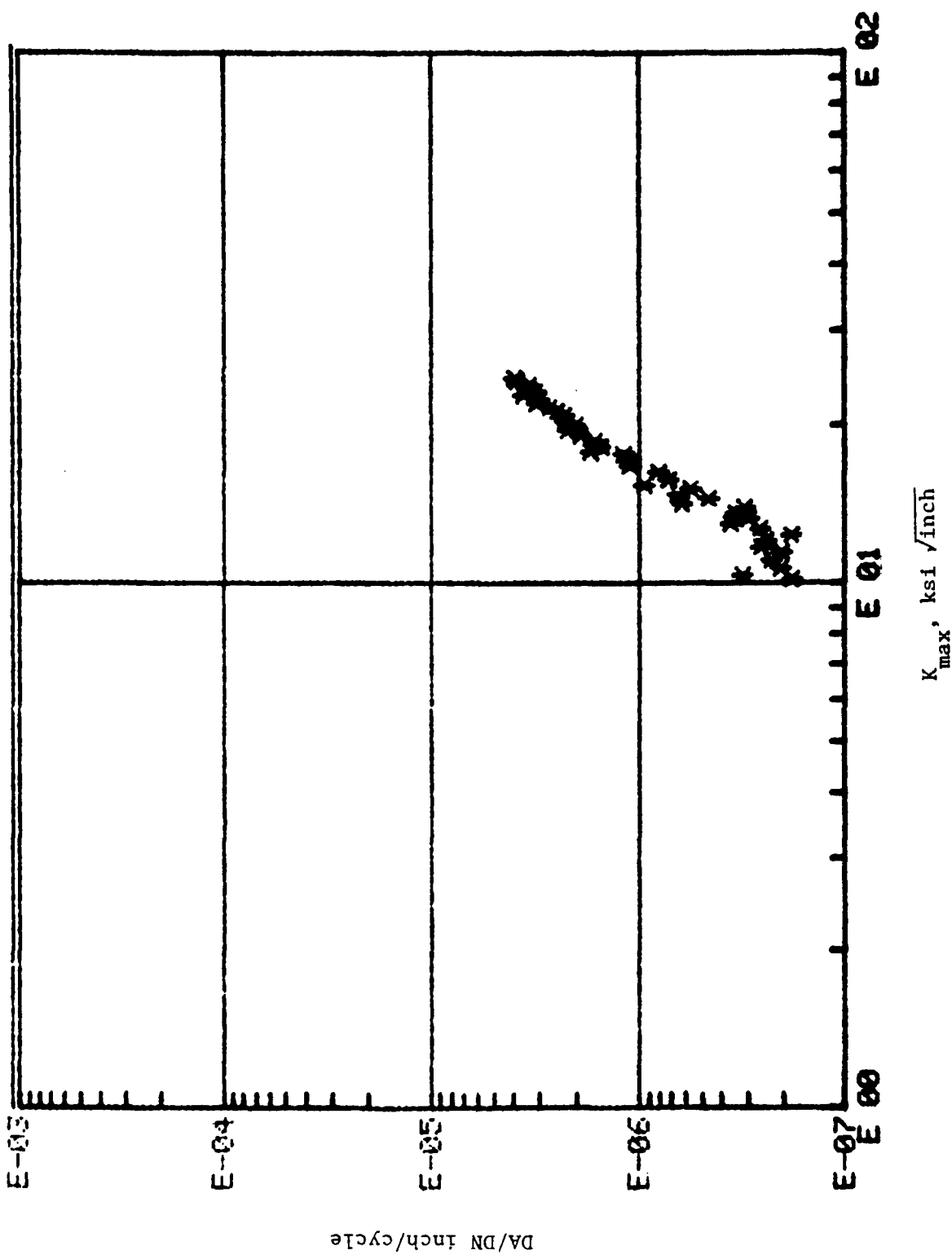
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN

BIAXIAL RATIO = -.5

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REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.89	-1.63	0	6.3	6.7	180	0
2	17.89	-1.63	54210	6.5	6.9	180	0
3	17.89	-1.63	100880	7	7	180	0
4	17.89	-1.63	244340	7.5	7.7	180	0
5	17.89	-1.63	362870	8	8.3	180	0
6	17.89	-1.63	485140	8.5	8.8	180	0
7	17.89	-1.63	572380	9	9.2	180	0
8	17.89	-1.63	694830	9.5	9.9	180	0
9	17.89	-1.63	776590	9.9	10.1	180	0
10	17.89	-1.63	900300	10.5	10.8	180	0
11	17.89	-1.63	962430	11	11.2	180	0
12	17.89	-1.63	1.05517E+06	11.5	11.8	180	0
13	17.89	-1.63	1.12069E+06	12	12.2	180	0
14	17.89	-1.63	1.22444E+06	12.5	13	180	0
15	17.89	-1.63	1.26042E+06	13	13.4	180	0
16	17.89	-1.63	1.32491E+06	13.5	14.1	180	0
17	17.89	-1.63	1.36678E+06	14	14.7	180	0
18	17.89	-1.63	1.41551E+06	14.5	15.3	180	0
19	17.89	-1.63	1.44202E+06	15	15.8	180	0
20	17.89	-1.63	1.50757E+06	16	16.7	180	0
21	17.89	-1.63	1.58153E+06	17	18.1	180	0
22	17.89	-1.63	1.62409E+06	18	19	180	0
23	17.89	-1.63	1.67039E+06	19	20.1	180	-1
24	17.89	-1.63	1.68929E+06	19.3	20.7	180	-1
25	17.89	-1.63	1.70845E+06	20	21.3	180	-1
26	17.89	-1.63	1.74611E+06	21	22.6	180	-1
27	17.89	-1.63	1.77821E+06	22	23.7	180	-1
28	17.89	-1.63	1.80314E+06	23	24.6	180	-1
29	17.89	-1.63	1.82823E+06	24	25.8	179	-1
30	17.89	-1.63	1.85423E+06	25	26.9	179	-1
31	17.89	-1.63	1.87732E+06	26	28	179	-1
32	17.89	-1.63	1.89902E+06	27	29	179	-1
33	17.89	-1.63	1.91941E+06	28	30	179	-1
34	17.89	-1.63	1.94188E+06	29	31.4	179	-1
35	17.89	-1.63	1.95798E+06	30	32.4	179	-1
36	17.89	-1.63	1.97625E+06	31	33.6	179	-1
37	17.89	-1.63	1.99157E+06	32	34.8	179	-1
38	17.89	-1.63	2.00833E+06	33	35.9	179	-1
39	17.89	-1.63	2.02286E+06	34	36.9	179	-1
40	17.89	-1.63	2.03908E+06	35	38.2	179	-1
41	17.89	-1.63	2.05478E+06	36	39.5	179	-1
42	17.89	-1.63	2.06741E+06	37	40.5	179	-1

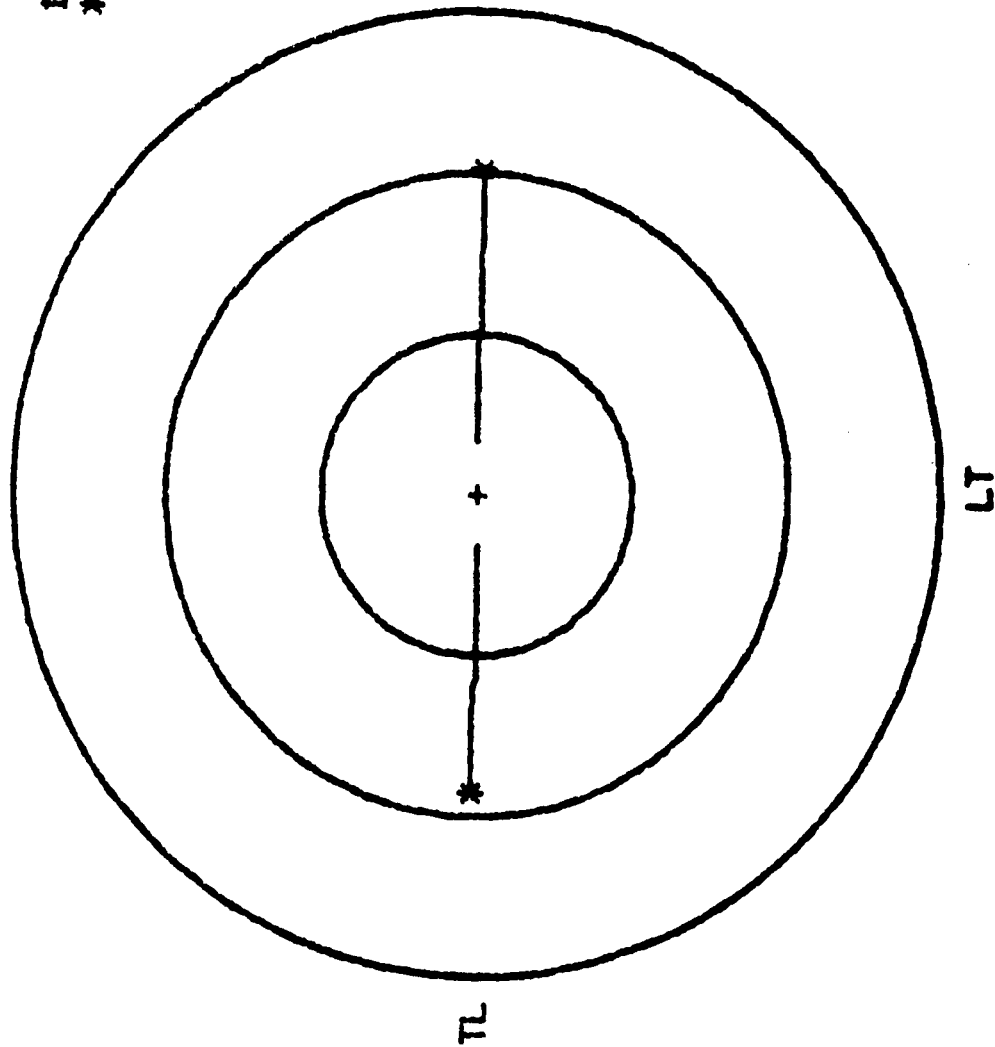
# SPECIMEN 2-27 TEST CASE 46



SPECIMEN 2-27

TEST CASE 46

1 IN SPACING  
\* TEST STOPPED



CRACK GROWTH TEST OF 2024-T3 TEST CASE 44 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 2-35 FLAW TYPE - 1

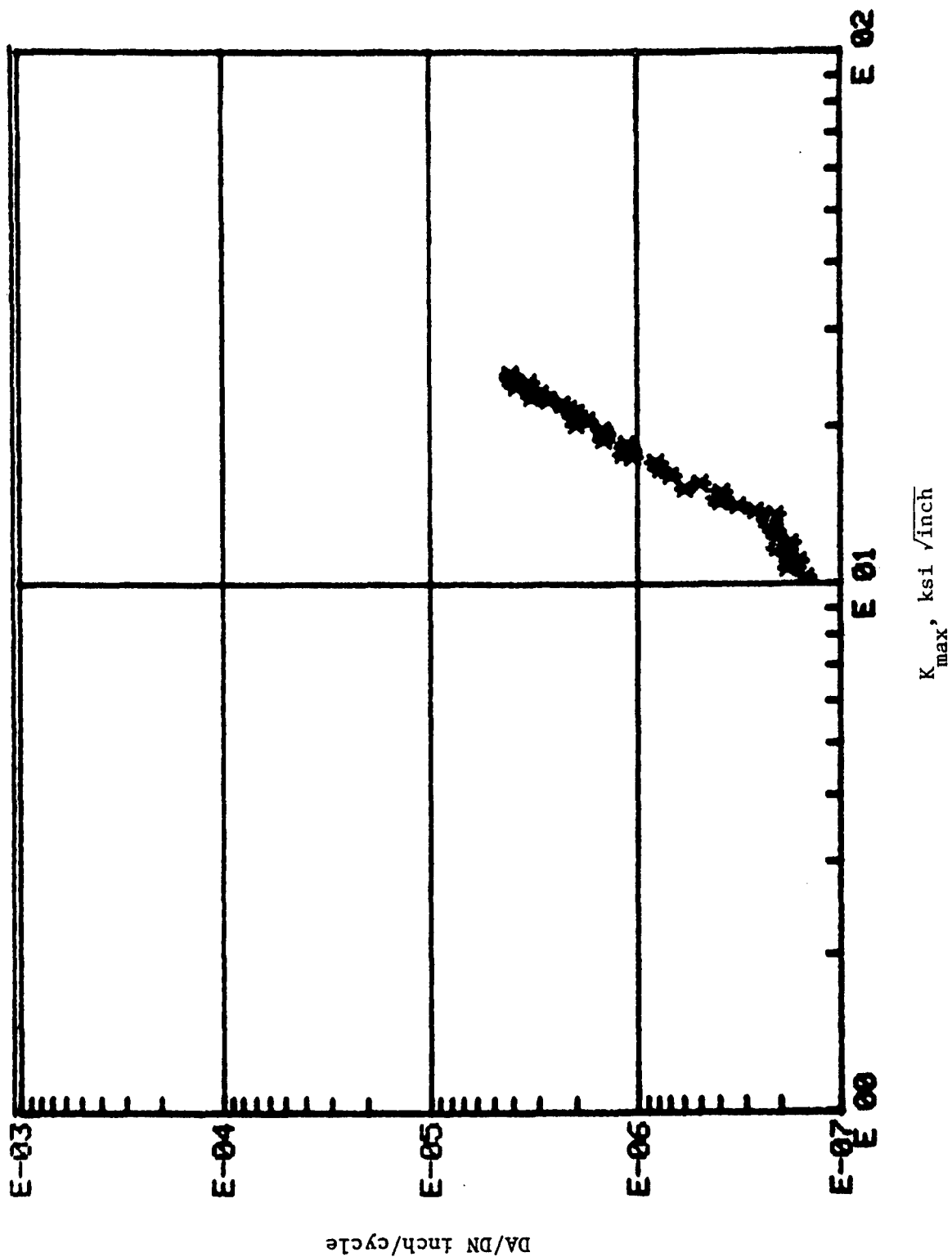
TEMP = 73 F REL HUM = 51% 4-17-78

B = .182 IN R(L) = .7 R(T) = .7

FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN

BIAXIAL RATIO = -1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	16.07	-8.5	0	6.3	6.6	175	1
2	16.07	-8.5	198960	7	7.1	176	1
3	16.07	-8.5	361770	7.5	7.8	176	1
4	16.07	-8.5	483790	8	8.1	176	1
5	16.07	-8.5	631910	8.5	8.7	176	1
6	16.07	-8.5	727700	9	9	176	1
7	16.07	-8.5	895880	9.5	9.7	176	0
8	16.07	-8.5	979610	9.9	10	176	0
9	16.07	-8.5	1.13214E+06	10.5	10.7	177	0
10	16.07	-8.5	1.24364E+06	11	11.2	178	0
11	16.07	-8.5	1.37217E+06	11.5	11.9	178	0
12	16.07	-8.5	1.46616E+06	12	12.2	178	0
13	16.07	-8.5	1.56960E+06	12.5	12.8	178	0
14	16.07	-8.5	1.63872E+06	13	13.2	178	0
15	16.07	-8.5	1.71396E+06	13.5	13.9	178	0
16	16.07	-8.5	1.76801E+06	14	14.3	178	0
17	16.07	-8.5	1.83820E+06	14.5	14.9	178	0
18	16.07	-8.5	1.88021E+06	15	15.4	178	0
19	16.07	-8.5	1.99539E+06	16	16.7	178	0
20	16.07	-8.5	2.06756E+06	17	17.7	178	0
21	16.07	-8.5	2.13222E+06	18	18.7	178	0
22	16.07	-8.5	2.19567E+06	19	19.8	178	0
23	16.07	-8.5	2.22380E+06	19.6	20.4	178	0
24	16.07	-8.5	2.24075E+06	20	20.8	178	0
25	16.07	-8.5	2.28451E+06	21	21.7	179	0
26	16.07	-8.5	2.33094E+06	22	22.8	179	0
27	16.07	-8.5	2.36723E+06	23	23.9	179	0
28	16.07	-8.5	2.40225E+06	24	24.9	179	0
29	16.07	-8.5	2.43960E+06	25.1	26	179	0
30	16.07	-8.5	2.46376E+06	26	27	179	0
31	16.07	-8.5	2.49231E+06	27	28	179	1
32	16.07	-8.5	2.51699E+06	28	29	179	1
33	16.07	-8.5	2.54246E+06	29	30	179	1
34	16.07	-8.5	2.56699E+06	30	31.1	179	1
35	16.07	-8.5	2.58860E+06	31	32.1	179	1
36	16.07	-8.5	2.60620E+06	32	33	179	1
37	16.07	-8.5	2.62019E+06	33	33.8	179	1
38	16.07	-8.5	2.63905E+06	34	35	179	1
39	16.07	-8.5	2.65612E+06	35	36.2	179	1
40	16.07	-8.5	2.66850E+06	36	37.1	179	1
41	16.07	-8.5	2.68436E+06	37	38.2	179	1
42	16.07	-8.5	2.70835E+06	39	40.1	179	1
43	16.07	-8.5	2.72070E+06	40	41.1	179	1

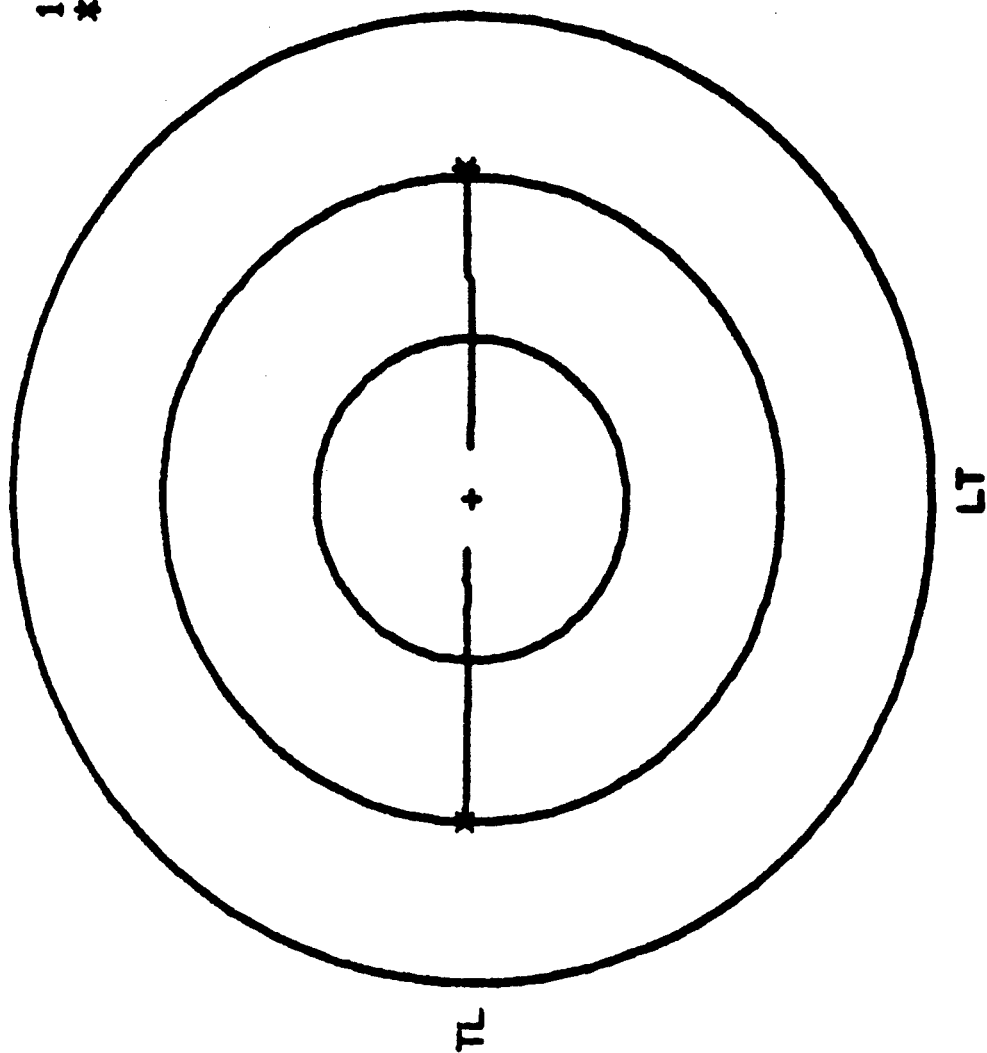




SPECIMEN 2-35

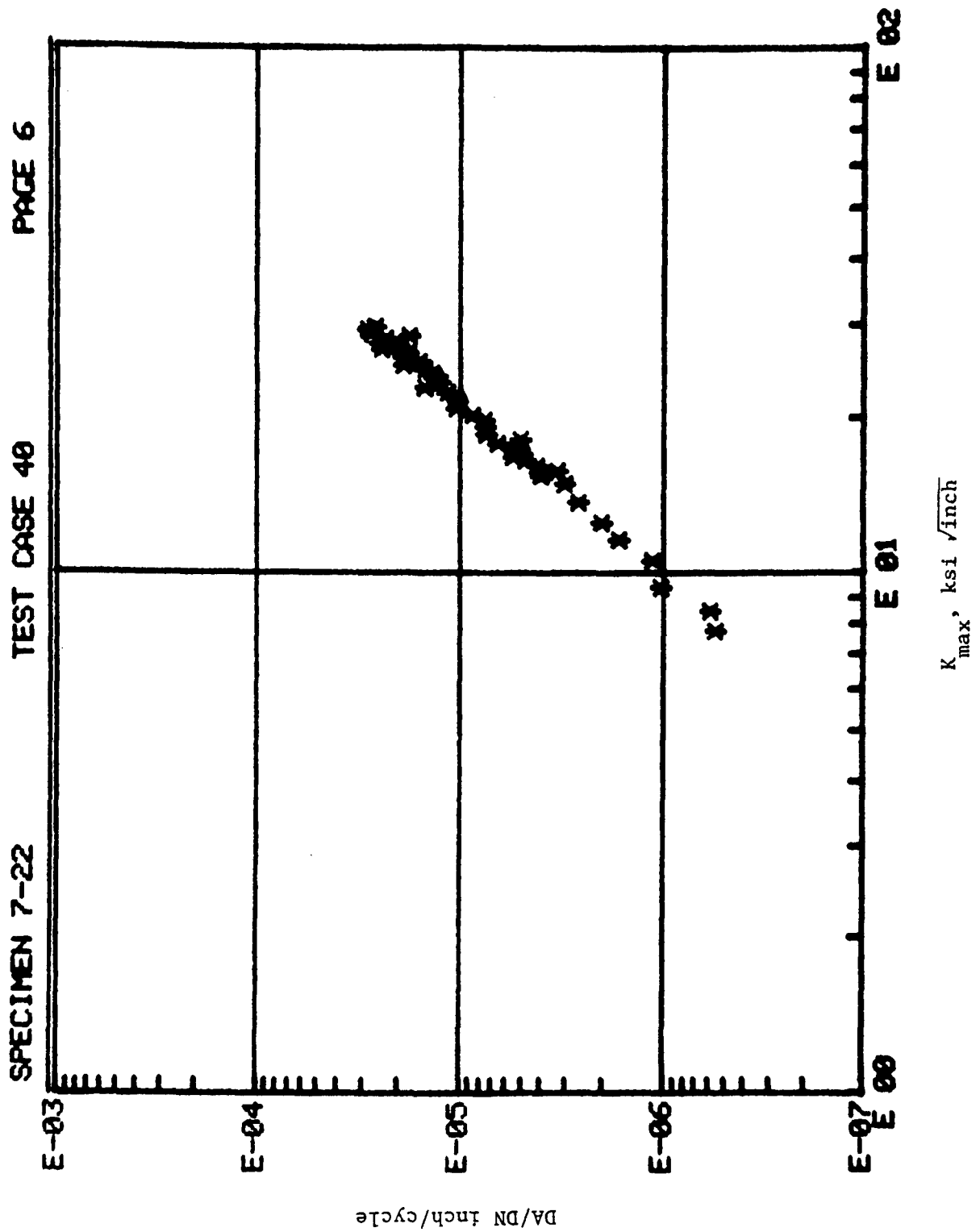
TEST CASE 44

1 IN SPACING  
\* TEST STOPPED



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CRACK GROWTH TEST OF 7075-T7 TEST CASE 40 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-22 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 52 % 12/12/77  
B = .179 IN R(L) = .1 R(T) = .1  
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN  
BIAXIAL RATIO = -1  
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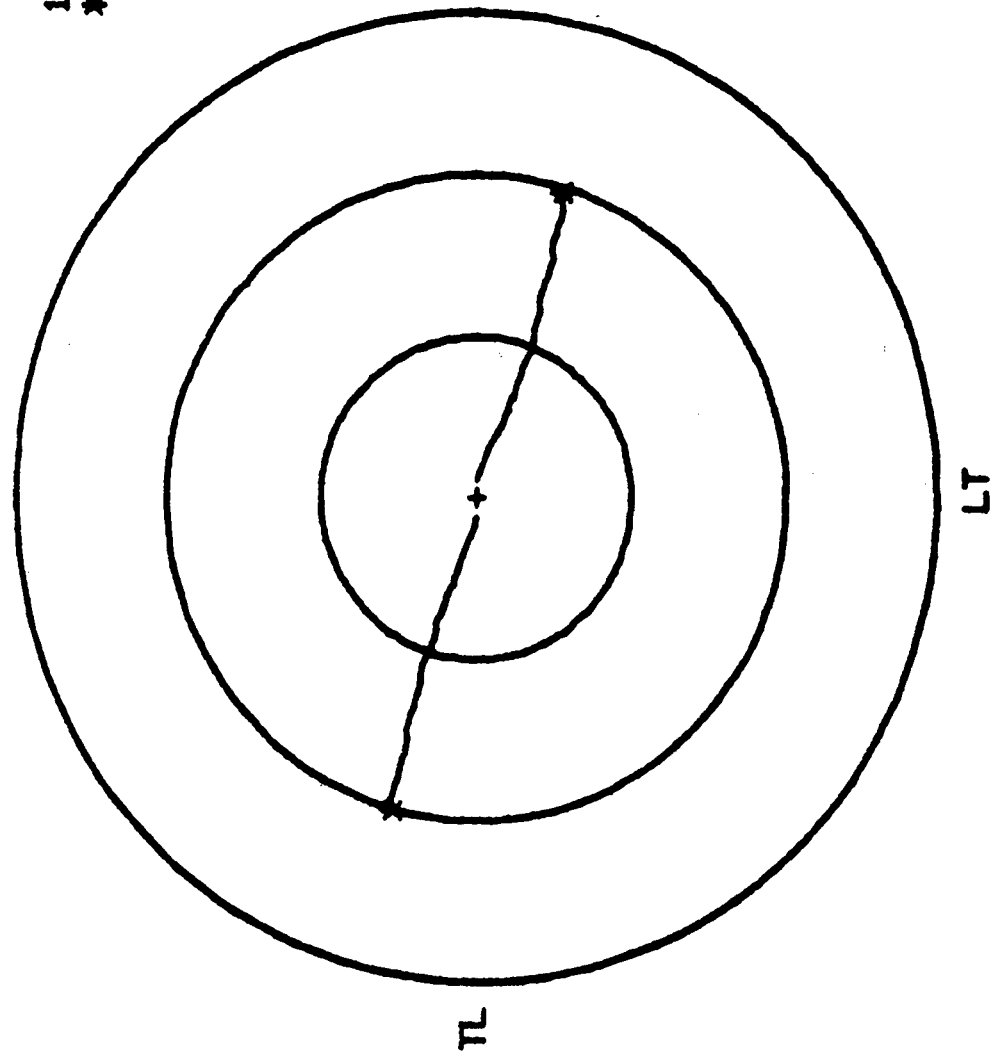
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.37	-17.37	0	2.5	2.3	179	-2
2	17.37	-17.37	49430	3	2.9	178	-4
3	17.37	-17.37	87340	3.5	3.3	176	-6
4	17.37	-17.37	138450	4.5	4.4	172	-10
5	17.37	-17.37	182220	5.5	5.4	169	-13
6	17.37	-17.37	213880	6.5	6.5	168	-14
7	17.37	-17.37	236080	7.5	7.3	167	-16
8	17.37	-17.37	273450	9.5	9.2	165	-19
9	17.37	-17.37	289790	10.5	10.2	165	-20
10	17.37	-17.37	296030	11	10.7	165	-20
11	17.37	-17.37	302050	11.5	11	164	-20
12	17.37	-17.37	309260	12	11.7	164	-20
13	17.37	-17.37	313470	12.5	12	163	-20
14	17.37	-17.37	318470	13	12.6	163	-20
15	17.37	-17.37	322670	13.5	13	163	-20
16	17.37	-17.37	327100	14	13.4	163	-20
17	17.37	-17.37	332100	14.7	14	163	-20
18	17.37	-17.37	335060	15	14.3	163	-20
19	17.37	-17.37	343160	16	15.7	162	-20
20	17.37	-17.37	349140	17	16.5	163	-20
21	17.37	-17.37	355080	18	17.3	163	-20
22	17.37	-17.37	360580	19	18.2	163	-20
23	17.37	-17.37	367040	20	19.9	163	-20
24	17.37	-17.37	370210	21	20.2	162	-20
25	17.37	-17.37	374780	22	21.1	162	-20
26	17.37	-17.37	379100	23	22.1	162	-19
27	17.37	-17.37	383110	24	23.5	163	-19
28	17.37	-17.37	387300	25	24.6	163	-19
29	17.37	-17.37	390840	26	25.5	163	-18
30	17.37	-17.37	394470	27	26.5	163	-18
31	17.37	-17.37	397150	28	27.1	163	-18
32	17.37	-17.37	400190	29	28.4	163	-18
33	17.37	-17.37	403180	30	29.3	163	-18
34	17.37	-17.37	405690	31	30.2	164	-18
35	17.37	-17.37	408470	32	31.2	164	-18
36	17.37	-17.37	410830	33	32.5	164	-17
37	17.37	-17.37	413300	34	33.5	164	-17
38	17.37	-17.37	415300	35	34.5	164	-17
39	17.37	-17.37	417350	36	35.4	164	-17
40	17.37	-17.37	420020	37	36.3	164	-17
41	17.37	-17.37	421940	38	37.4	164	-17
42	17.37	-17.37	423780	39	38.5	164	-16
43	17.37	-17.37	425710	40	39.5	165	-16



SPECIMEN 7-22

TEST CASE 40

1 IN SPACING  
\* TEST STOPPED

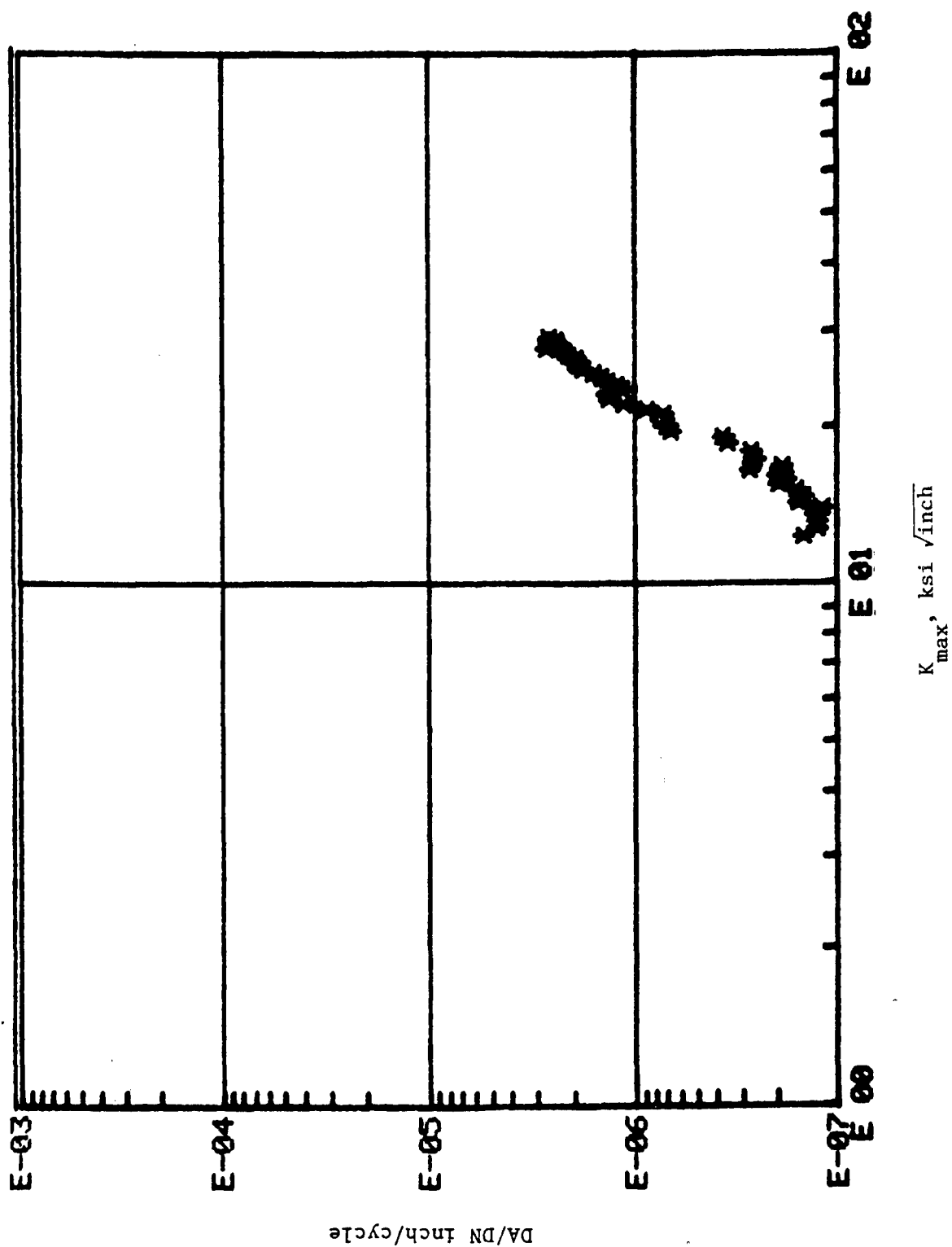


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CRACK GROWTH TEST OF 7075-T7 TEST CASE 117 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-45 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 50 % 12-19-77  
B = .174 IN R(L) = .7 R(T) = .7  
FREQ = 10 HZ PHASE ANGLE = 180 GRID SPACING = .05 IN  
BIAXIAL RATIO = -1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.4	-17.4	0	6.5	6.5	180	-1
2	17.4	-17.4	186360	7	7.1	180	-2
3	17.4	-17.4	384190	7.5	7.6	179	-3
4	17.4	-17.4	562640	8	8	179	-3
5	17.4	-17.4	755560	8.5	8.5	178	-4
6	17.4	-17.4	944860	9	8.9	177	-4
7	17.4	-17.4	1.12111E+06	9.5	9.5	175	-5
8	17.4	-17.4	1.29059E+06	10	10	174	-6
9	17.4	-17.4	1.44564E+06	10.5	10.5	173	-7
10	17.4	-17.4	1.58554E+06	11	11.1	172	-9
11	17.4	-17.4	1.70968E+06	11.5	11.5	171	-9
12	17.4	-17.4	1.82224E+06	12	11.9	170	-10
13	17.4	-17.4	1.92203E+06	12.5	12.5	169	-11
14	17.4	-17.4	2.04156E+06	13	12.9	169	-12
15	17.4	-17.4	2.22534E+06	14	13.8	168	-13
16	17.4	-17.4	2.40146E+06	15	14.7	166	-14
17	17.4	-17.4	2.54203E+06	16	15.7	165	-15
18	17.4	-17.4	2.64829E+06	17	16.3	164	-16
19	17.4	-17.4	2.71157E+06	18	17	164	-16
20	17.4	-17.4	2.77921E+06	19	17.9	163	-16
21	17.4	-17.4	2.83864E+06	20	18.7	163	-17
22	17.4	-17.4	2.89330E+06	21	19.3	163	-18
23	17.4	-17.4	2.94689E+06	22	20.2	162	-18
24	17.4	-17.4	2.98617E+06	23	21	162	-18
25	17.4	-17.4	3.02348E+06	24	22	162	-19
26	17.4	-17.4	3.05975E+06	25	23	162	-19
27	17.4	-17.4	3.10000E+06	26	23.9	161	-19
28	17.4	-17.4	3.13740E+06	27	24.7	161	-19
29	17.4	-17.4	3.17060E+06	28	25.5	161	-19
30	17.4	-17.4	3.20315E+06	29.1	26.3	161	-19
31	17.4	-17.4	3.23004E+06	30	27.1	161	-20
32	17.4	-17.4	3.25661E+06	31	28	161	-20
33	17.4	-17.4	3.28194E+06	32	28.9	160	-20
34	17.4	-17.4	3.30511E+06	33	29.7	160	-20
35	17.4	-17.4	3.32579E+06	34	30.3	160	-21
36	17.4	-17.4	3.35081E+06	35.1	31.3	160	-21
37	17.4	-17.4	3.36893E+06	36	32	160	-21
38	17.4	-17.4	3.38651E+06	37	32.9	160	-21
39	17.4	-17.4	3.40510E+06	38	33.7	160	-21
40	17.4	-17.4	3.42390E+06	39	34.5	160	-21
41	17.4	-17.4	3.44040E+06	40	35.1	159	-22
42	17.4	-17.4	3.45861E+06	41	36	159	-22

SPECIMEN 7-45

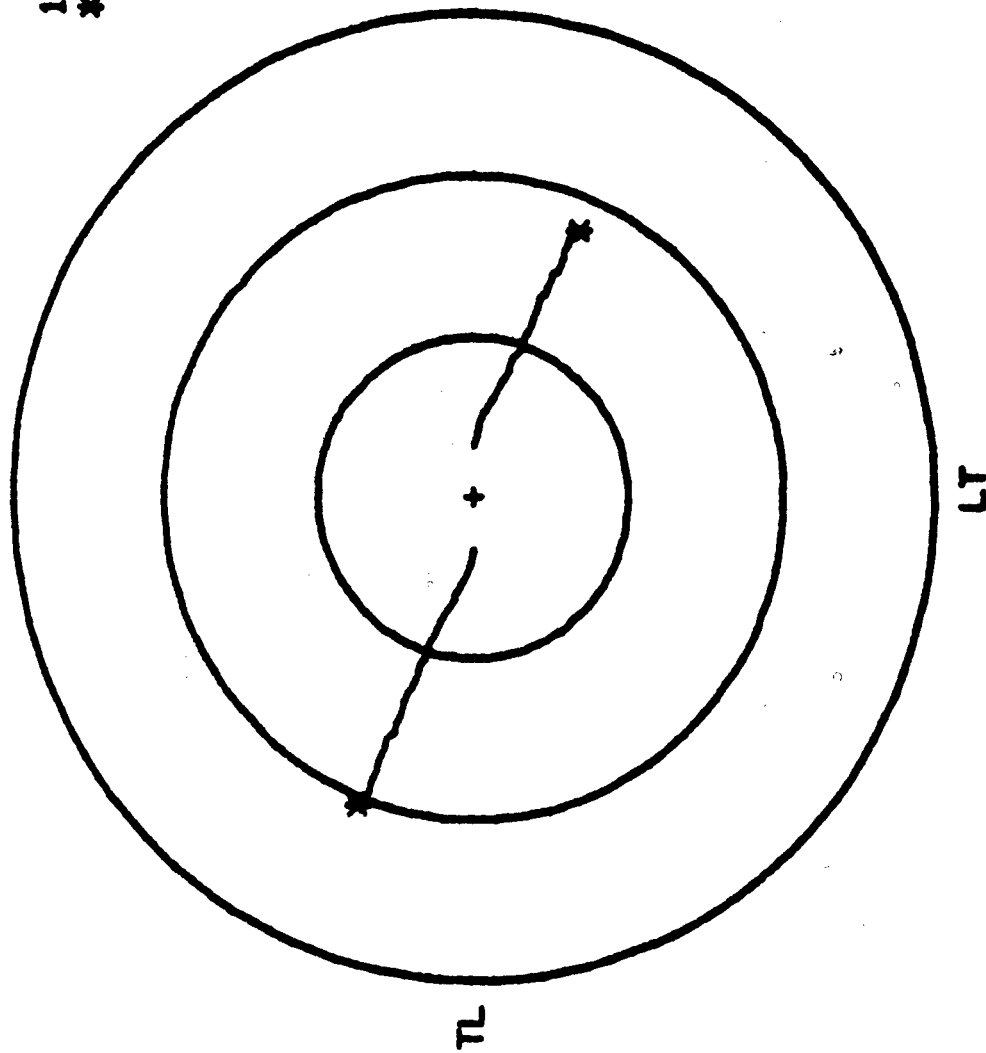
TEST CASE 117





SPECIMEN 7-45

TEST CASE 117



1 IN SPACING  
\* TEST STOPPED

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CRACK GROWTH TEST OF 7075-T7 TEST CASE 95 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-15 FLAW TYPE - 1

TEMP = 75 F REL HUM = 55 % 5-1-78

B = .18 IN R(L) = .1 R(T) = 1

FREQ = 5 HZ PHASE ANGLE = GRID SPACING = .05 IN

BIAXIAL RATIO = .5

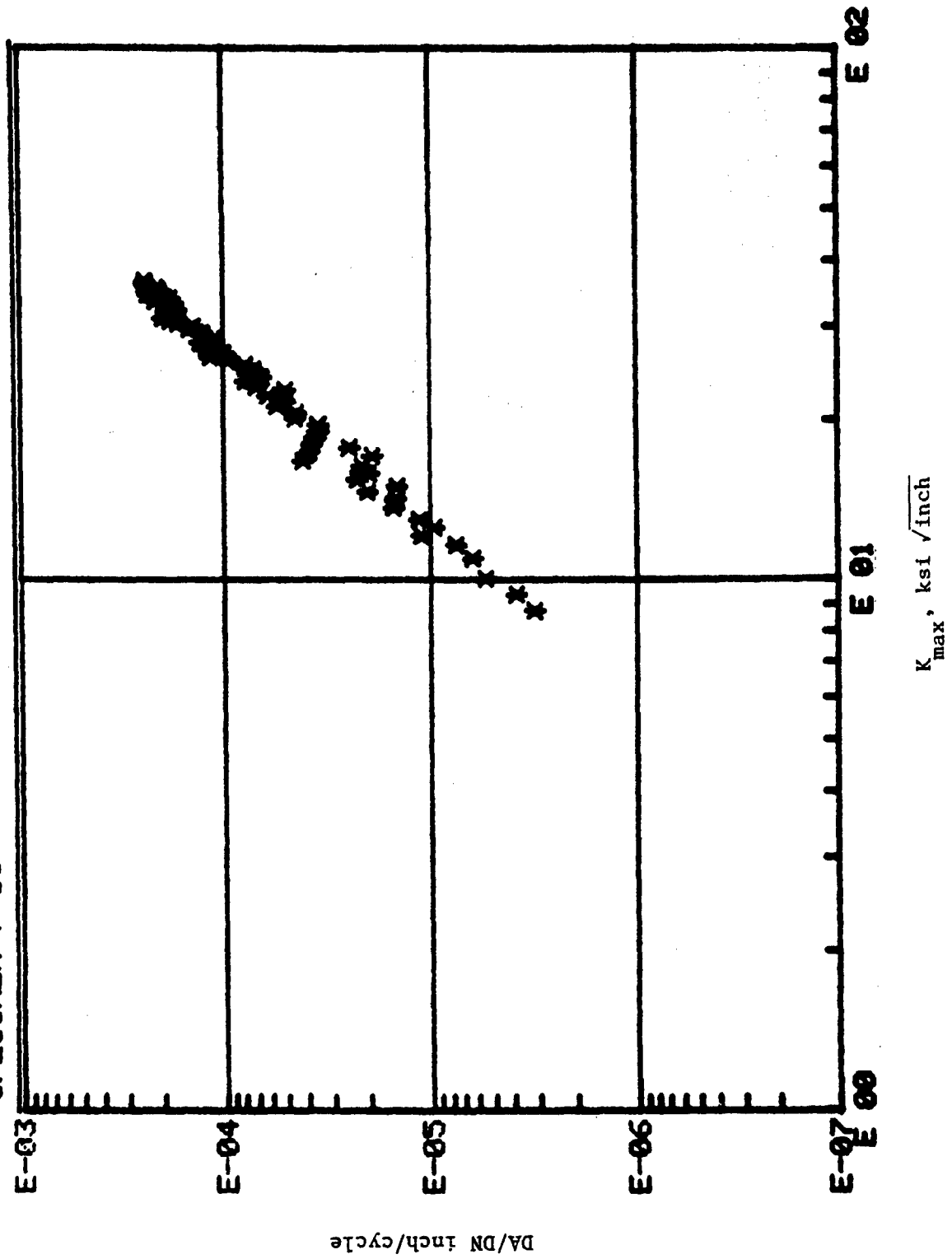
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REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	26.76	18.09	0	3.2	3	180	-1
2	26.76	18.09	9580	3.8	3.6	180	-1
3	26.76	18.09	14760	4.2	4	180	0
4	26.76	18.09	21660	5	4.7	180	0
5	26.76	18.09	29300	6	5.6	179	0
6	26.76	18.09	32630	6.5	6.1	179	0
7	26.76	18.09	35110	7	6.7	179	0
8	26.76	18.09	37210	7.5	7	179	1
9	26.76	18.09	39860	8	7.7	180	1
10	26.76	18.09	43180	9	8.7	180	1
11	26.76	18.09	44710	9.5	9.1	179	1
12	26.76	18.09	46070	10	9.7	179	1
13	26.76	18.09	47960	10.6	10.2	179	1
14	26.76	18.09	49180	11	10.9	179	1
15	26.76	18.09	51060	12	11.4	179	0
16	26.76	18.09	52580	12.5	12.2	178	0
17	26.76	18.09	53190	13	12.7	178	0
18	26.76	18.09	54380	13.5	13.1	178	0
19	26.76	18.09	55030	14	13.6	178	0
20	26.76	18.09	55950	14.5	14	178	0
21	26.76	18.09	56620	15	14.5	178	0
22	26.76	18.09	58010	16	15.5	178	0
23	26.76	18.09	59240	17	16.2	179	0
24	26.76	18.09	60540	18	17	179	0
25	26.76	18.09	61720	19	18.1	179	0
26	26.76	18.09	62850	20	19.1	179	0
27	26.76	18.09	63720	21	20	179	0
28	26.76	18.09	64720	22	21	179	0
29	26.76	18.09	65550	23	22	179	0
30	26.76	18.09	66540	24	23	179	0
31	26.76	18.09	67270	25	24	179	0
32	26.76	18.09	67910	26	25	179	0
33	26.76	18.09	68680	27	26	179	0
34	26.76	18.09	69380	28	26.8	179	0
35	26.76	18.09	69830	29	27.3	179	-1
36	26.76	18.09	70470	30	28.3	179	-1
37	26.76	18.09	71000	31	29.3	179	-1
38	26.76	18.09	71460	32	30.4	179	-1
39	26.76	18.09	71960	33	31.4	179	-1
40	26.76	18.09	72460	34	32.8	179	-1
41	26.76	18.09	72900	35	33.8	179	-1
42	26.76	18.09	73290	36	34.8	179	-1
43	26.76	18.09	73760	37	35.9	179	-1
44	26.76	18.09	74180	38	37	179	-1
45	26.76	18.09	74600	39	38.1	179	-1
46	26.76	18.09	74930	40	39	179	-1
47	26.76	18.09	75290	41	40	179	-1
48	26.76	18.09	75580	42	40.9	179	-1
49	26.76	18.09	75860	43	41.9	179	-1
50	26.76	18.09	76130	44	43	179	-1

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	26.76	18.09	76410	45	43.9	179	-1
52	26.76	18.09	76690	46	44.9	179	-1
53	26.76	18.09	76990	47	45.9	179	-1
54	26.76	18.09	77260	48	46.8	179	-1
55	26.76	18.09	77520	49	47.7	179	-1
56	26.76	18.09	77770	50	48.6	179	-1
57	26.76	18.09	78040	51	49.9	179	-1
58	26.76	18.09	78290	52	50.7	179	-1
59	26.76	18.09	78500	53	51.3	179	-1
60	26.76	18.09	78790	54	53	179	-1
61	26.76	18.09	78990	55	53.8	179	-1
62	26.76	18.09	79260	56	55	179	-1
63	26.76	18.09	79500	57	56	179	-1
64	26.76	18.09	79710	58	57	179	-1
65	26.76	18.09	79920	59	58	179	-1
66	26.76	18.09	80130	60	59	179	-1

# TEST CASE 95

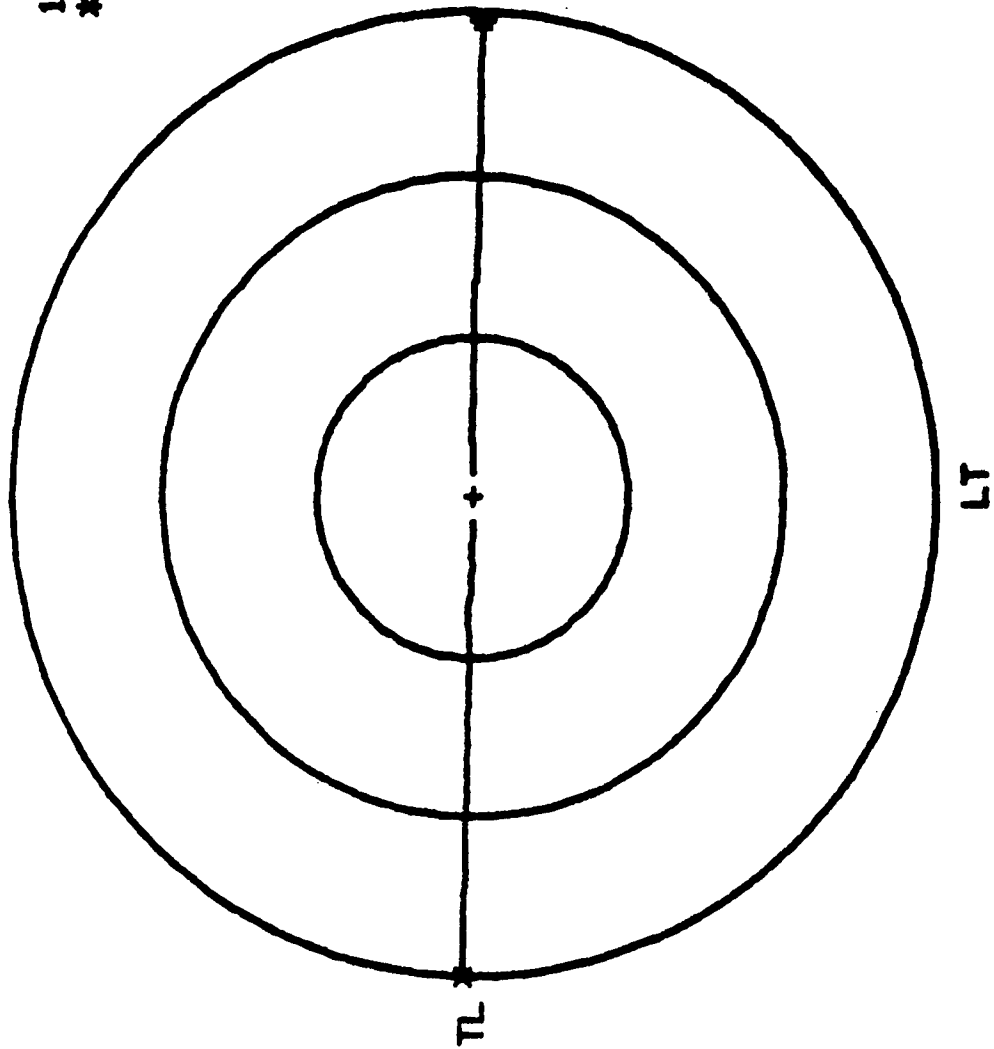
SPECIMEN 7-15



SPECIMEN 7-15

TEST CASE 95

1 IN SPACING  
\* TEST STOPPED

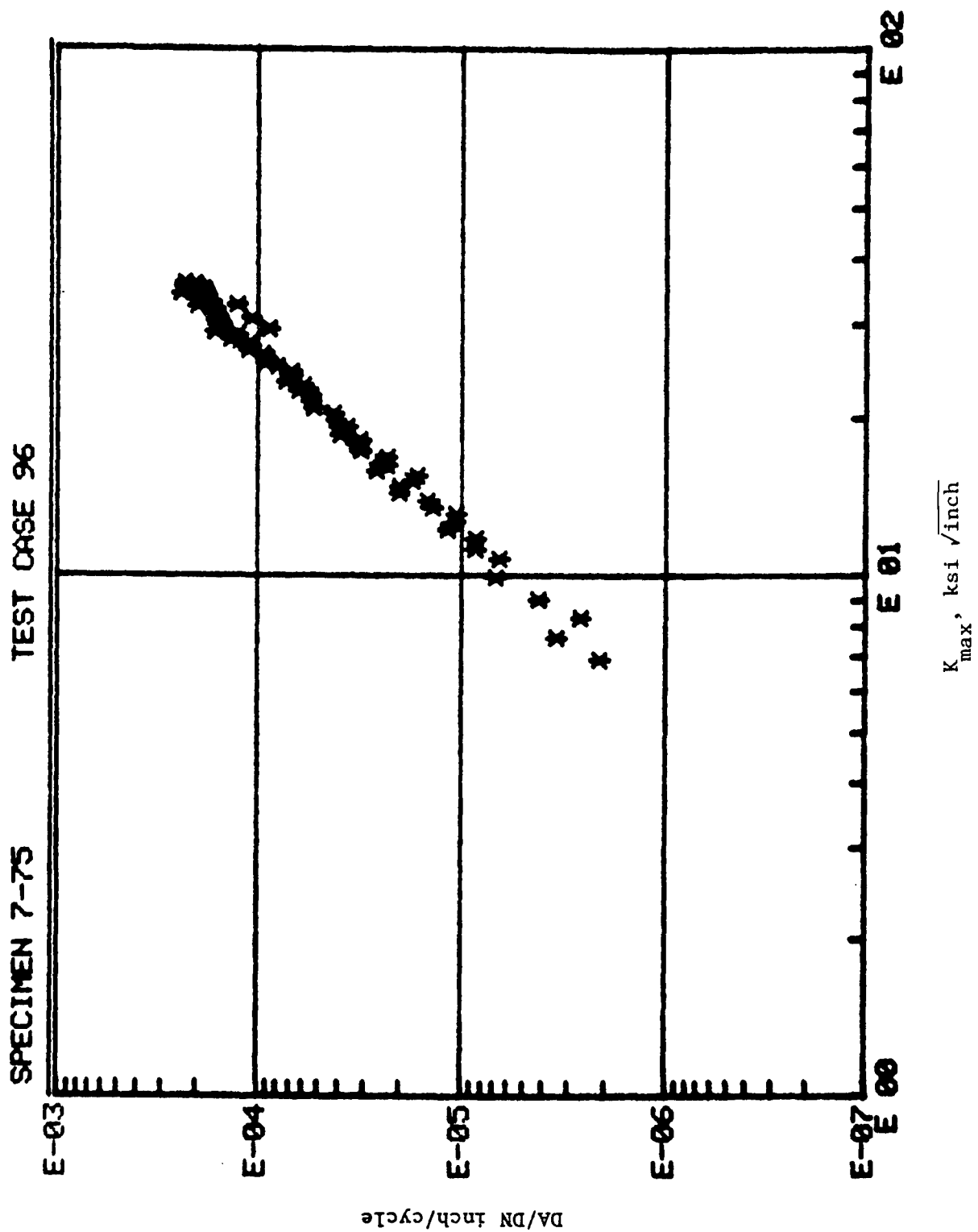


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CRACK GROWTH TEST OF 7075-T7 TEST CASE 96 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-75 FLAW TYPE - 1  
TEMP = 74 F REL HUM = 68 % 5-3-78  
B = .176 IN R(L) = .1 R(T) = 1  
FREQ = 5 HZ PHASE ANGLE = GRID SPACING = .05 IN  
BIAXIAL RATIO = .5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	26.76	18.09	0	2.1	1.8	180	0
2	26.76	18.09	8300	2.5	2.1	180	0
3	26.76	18.09	16290	3	2.7	180	0
4	26.76	18.09	24900	3.5	3.1	180	0
5	26.76	18.09	32050	4	3.8	180	0
6	26.76	18.09	39000	5	4.7	180	0
7	26.76	18.09	43600	5.6	5.3	180	0
8	26.76	18.09	46250	6	5.8	180	0
9	26.76	18.09	49780	6.6	6.4	180	0
10	26.76	18.09	51490	7	6.8	180	0
11	26.76	18.09	54290	7.6	7.4	180	0
12	26.76	18.09	56180	8	7.8	180	0
13	26.76	18.09	57990	8.5	8.3	180	0
14	26.76	18.09	59850	9	8.9	180	0
15	26.76	18.09	61600	9.7	9.6	180	0
16	26.76	18.09	62340	10	9.9	180	0
17	26.76	18.09	64060	10.5	10.6	180	0
18	26.76	18.09	65580	11	11.1	180	0
19	26.76	18.09	66640	11.5	11.7	180	0
20	26.76	18.09	67500	12	12	180	0
21	26.76	18.09	68430	12.5	12.4	180	0
22	26.76	18.09	69620	13	13	180	0
23	26.76	18.09	71210	14	14	180	-1
24	26.76	18.09	72130	14.6	14.6	180	-1
25	26.76	18.09	72770	15	15	180	-1
26	26.76	18.09	73970	16	15.9	180	-2
27	26.76	18.09	75420	17	17	179	-2
28	26.76	18.09	76640	18	18	179	-2
29	26.76	18.09	77830	19	19	179	-2
30	26.76	18.09	78770	20	20	179	-2
31	26.76	18.09	79690	21	21	179	-2
32	26.76	18.09	80600	22	22	179	-2
33	26.76	18.09	81450	23	23.1	179	-2
34	26.76	18.09	82250	24	24	179	-2
35	26.76	18.09	82980	25	25.1	179	-2
36	26.76	18.09	83790	26	26.3	179	-2
37	26.76	18.09	84490	27	27.2	179	-2
38	26.76	18.09	85170	28	28.4	179	-2
39	26.76	18.09	85660	29	29.2	179	-2
40	26.76	18.09	86380	30	30.5	179	-2
41	26.76	18.09	86910	31	31.8	179	-2
42	26.76	18.09	87340	32	32.7	179	-2
43	26.76	18.09	87780	33	33.6	179	-2
44	26.76	18.09	88120	34	34.1	179	-2
45	26.76	18.09	88510	35	35	179	-2
46	26.76	18.09	88880	36	36	179	-2
47	26.76	18.09	89260	37	36.9	179	-2
48	26.76	18.09	89570	38	37.9	179	-2
49	26.76	18.09	89910	39	38.1	179	-2
50	26.76	18.09	90220	40	39	179	-2



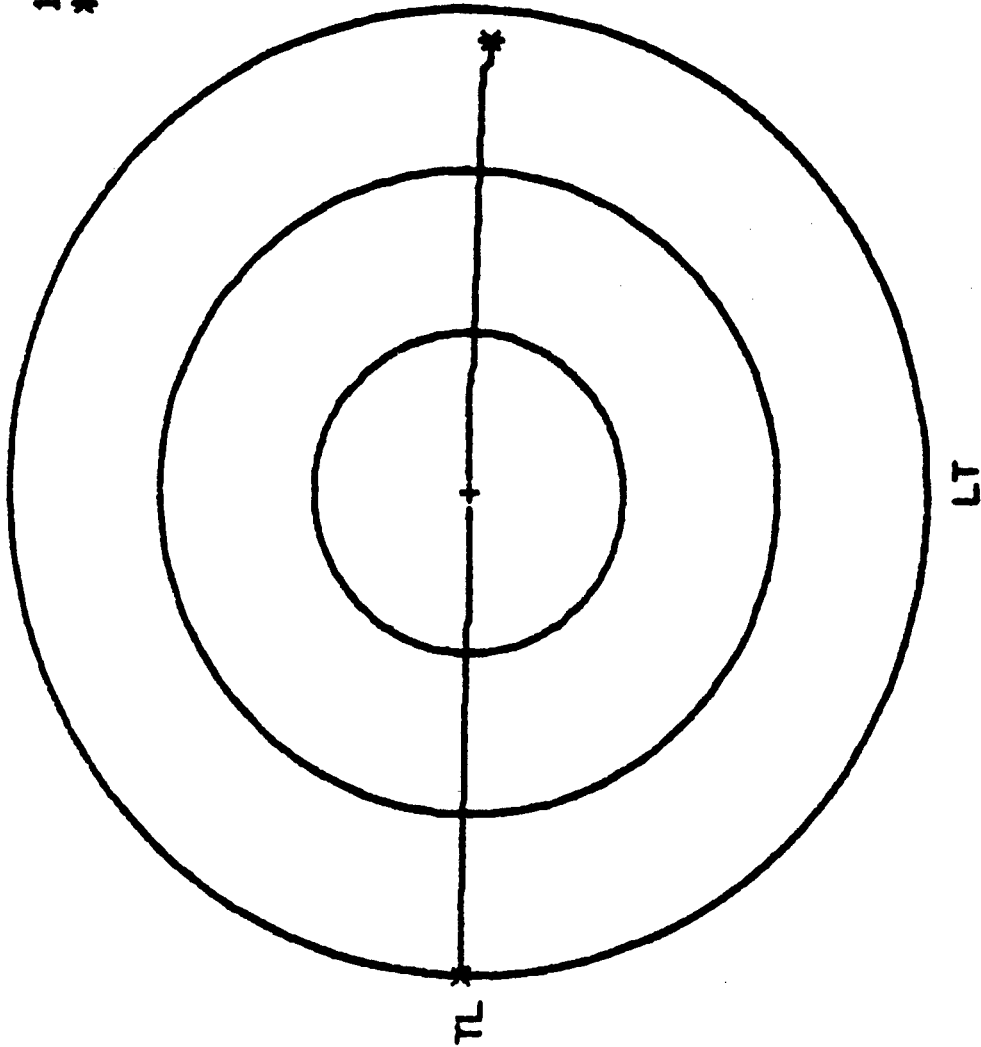
REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	26.76	18.09	90550	41	40	179	-2
52	26.76	18.09	90840	42	40.8	179	-2
53	26.76	18.09	91190	43	41.3	179	-2
54	26.76	18.09	91460	44	42	179	-2
55	26.76	18.09	91780	45	43.1	179	-2
56	26.76	18.09	92070	46	44	179	-2
57	26.76	18.09	92380	47	45	179	-2
58	26.76	18.09	92620	48	45.9	179	-2
59	26.76	18.09	92880	49	46.2	179	-2
60	26.76	18.09	93170	50	47.2	179	-2
61	26.76	18.09	93440	51	48.2	179	-2
62	26.76	18.09	93670	52	49	179	-2
63	26.76	18.09	93940	53	50	179	-2
64	26.76	18.09	94150	54	51	179	-2
65	26.76	18.09	94410	55	51.9	179	-2
66	26.76	18.09	94640	56	52.6	179	-2
67	26.76	18.09	94980	57	53.5	179	-3
68	26.76	18.09	95100	58	54.3	179	-3
69	26.76	18.09	95320	59	55.1	179	-3
70	26.76	18.09	95550	60	56.2	179	-3



SPECIMEN 7-75

TEST CASE 96

1 IN SPACING  
\* TEST STOPPED



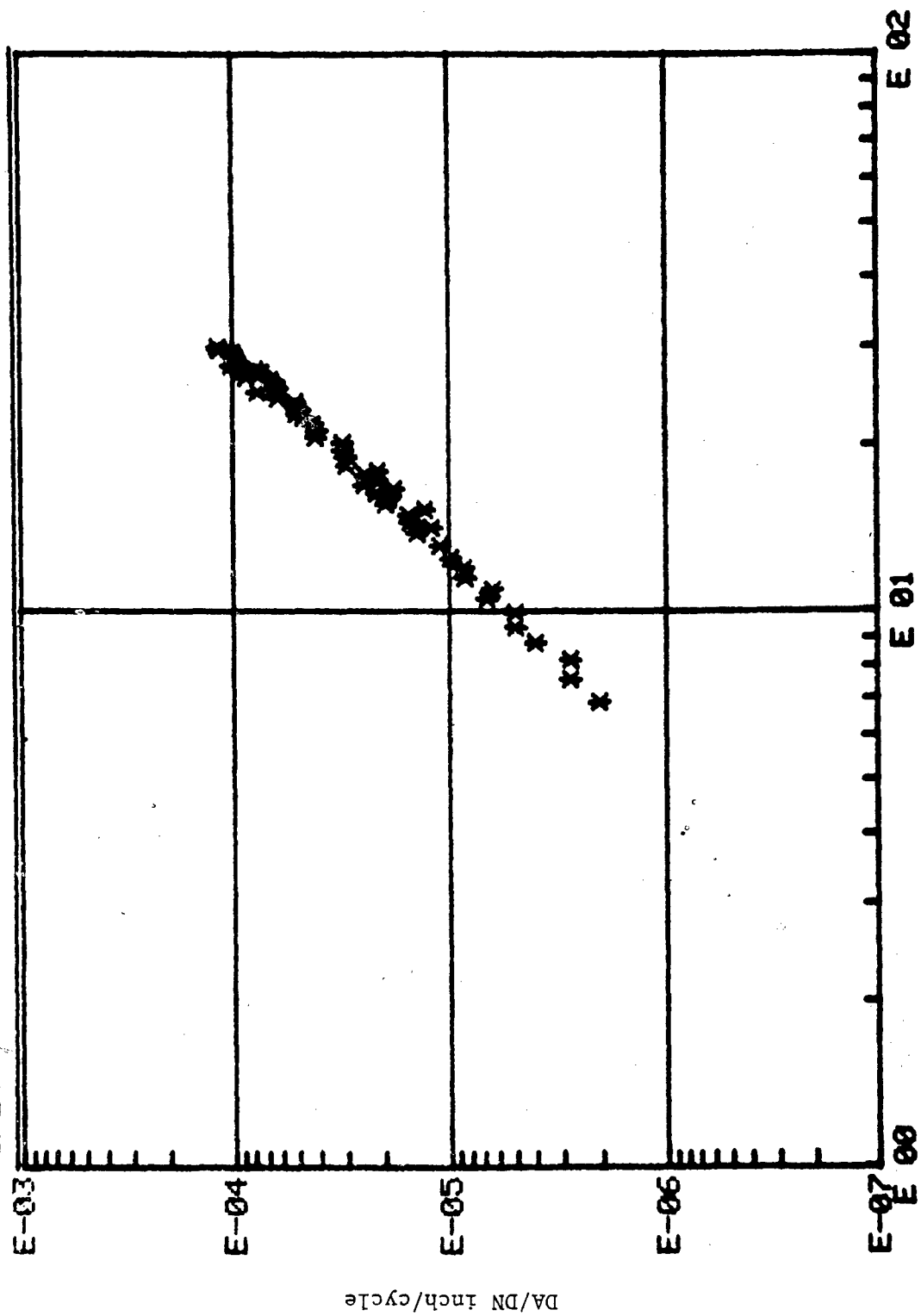
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CRACK GROWTH TEST OF 7075-T7 TEST CASE 97 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-73 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 55 % 5-2-78  
B = .176 IN R(L) = .1 R(T) = 1  
FREQ = 5 HZ PHASE ANGLE = GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
-----

REF #	P(L) KIPS	P(R) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	20.54	-5.5	0	2	1.9	180	0
2	20.54	-5.5	8500	2.5	2.1	180	0
3	20.54	-5.5	17580	3	2.6	180	0
4	20.54	-5.5	24760	3.5	2.9	180	0
5	20.54	-5.5	30980	4	3.4	180	0
6	20.54	-5.5	35510	4.5	3.8	180	0
7	20.54	-5.5	40550	5	4.3	180	0
8	20.54	-5.5	44660	5.5	4.9	180	0
9	20.54	-5.5	48210	6	5.3	180	0
10	20.54	-5.5	51490	6.5	5.9	180	0
11	20.54	-5.5	54420	7	6.4	180	0
12	20.54	-5.5	57200	7.5	7	180	0
13	20.54	-5.5	61700	8.5	8	180	-1
14	20.54	-5.5	63830	9.1	8.6	180	-1
15	20.54	-5.5	65280	9.5	8.9	180	-1
16	20.54	-5.5	66930	10	9.4	180	-1
17	20.54	-5.5	68980	10.6	10	180	-1
18	20.54	-5.5	70240	11	10.3	180	-1
19	20.54	-5.5	71510	11.5	10.8	180	-1
20	20.54	-5.5	72820	12	11.3	180	-1
21	20.54	-5.5	74100	12.5	11.9	180	-1
22	20.54	-5.5	75080	13	12.1	180	-1
23	20.54	-5.5	76410	13.5	12.9	180	-1
24	20.54	-5.5	77330	14	13.2	180	-1
25	20.54	-5.5	78560	14.5	13.9	180	-1
26	20.54	-5.5	79500	15	14.2	180	-2
27	20.54	-5.5	81100	16	15.1	180	-2
28	20.54	-5.5	82950	17	16.3	180	-2
29	20.54	-5.5	84410	18	17.1	180	-2
30	20.54	-5.5	86020	19	18.1	180	-2
31	20.54	-5.5	87300	20	19.2	181	-2
32	20.54	-5.5	88480	21	20.1	180	-2
33	20.54	-5.5	89780	22	21.3	181	-3
34	20.54	-5.5	90950	23	22.5	181	-3
35	20.54	-5.5	91850	24	23.3	181	-3
36	20.54	-5.5	92900	25	24.4	181	-3
37	20.54	-5.5	93880	26	25.4	181	-2
38	20.54	-5.5	94780	27	26.6	181	-3
39	20.54	-5.5	95500	28	27.8	181	-3
40	20.54	-5.5	96230	29	28.6	181	-3
41	20.54	-5.5	97000	30	29.6	181	-2
42	20.54	-5.5	97720	31	30.5	181	-2
43	20.54	-5.5	98270	32	31.4	181	-2
44	20.54	-5.5	98890	33	32.2	181	-2
45	20.54	-5.5	99590	34	33.4	181	-2
46	20.54	-5.5	100010	35	34.1	181	-2
47	20.54	-5.5	100510	36	35	181	-2
48	20.54	-5.5	101030	37	36	181	-2
49	20.54	-5.5	101530	38	37	181	-2
50	20.54	-5.5	101980	39	37.8	181	-2

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	20.54	-5.5	102370	40	38.6	181	-2
52	20.54	-5.5	102820	41	39.7	181	-2

TEST CASE 97

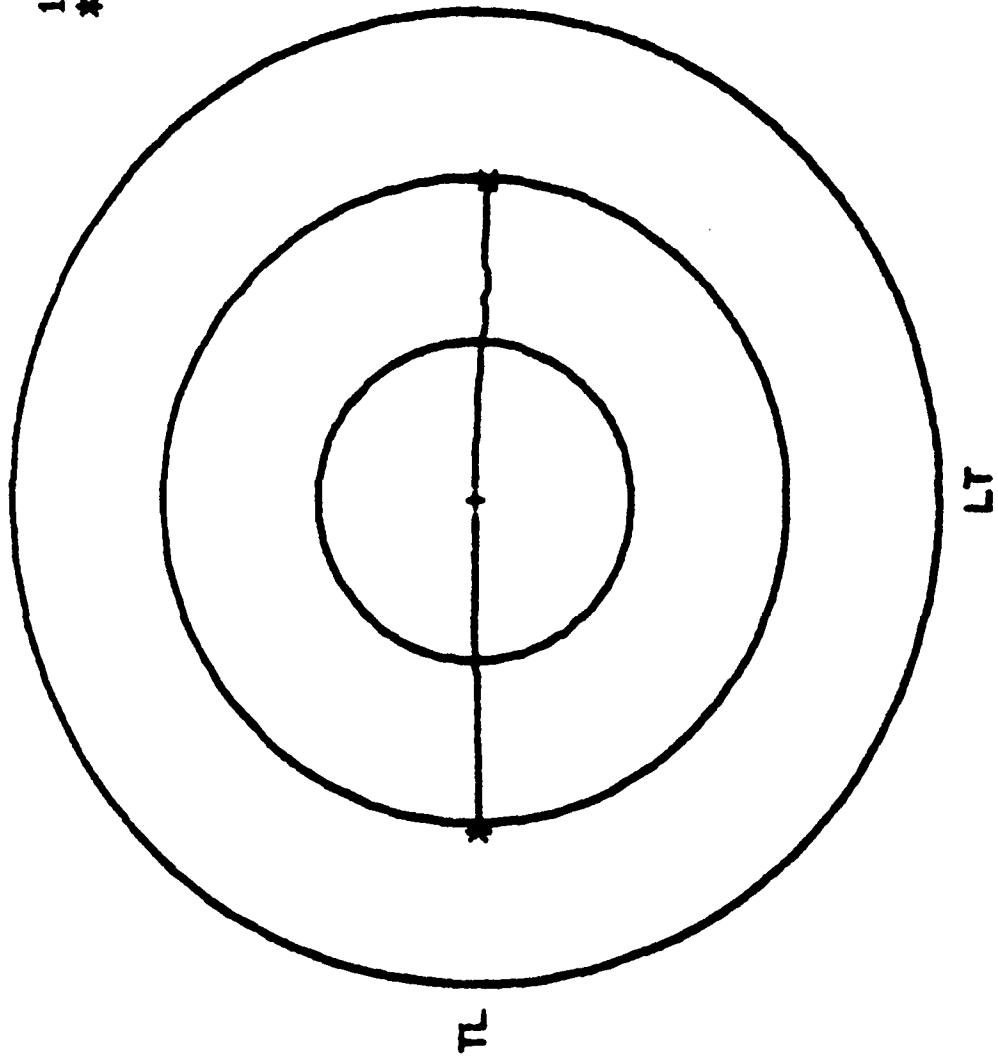
SPECIMEN 7-73



SPECIMEN 7-73

TEST CASE 97

1 IN SPACING  
\* TEST STOPPED

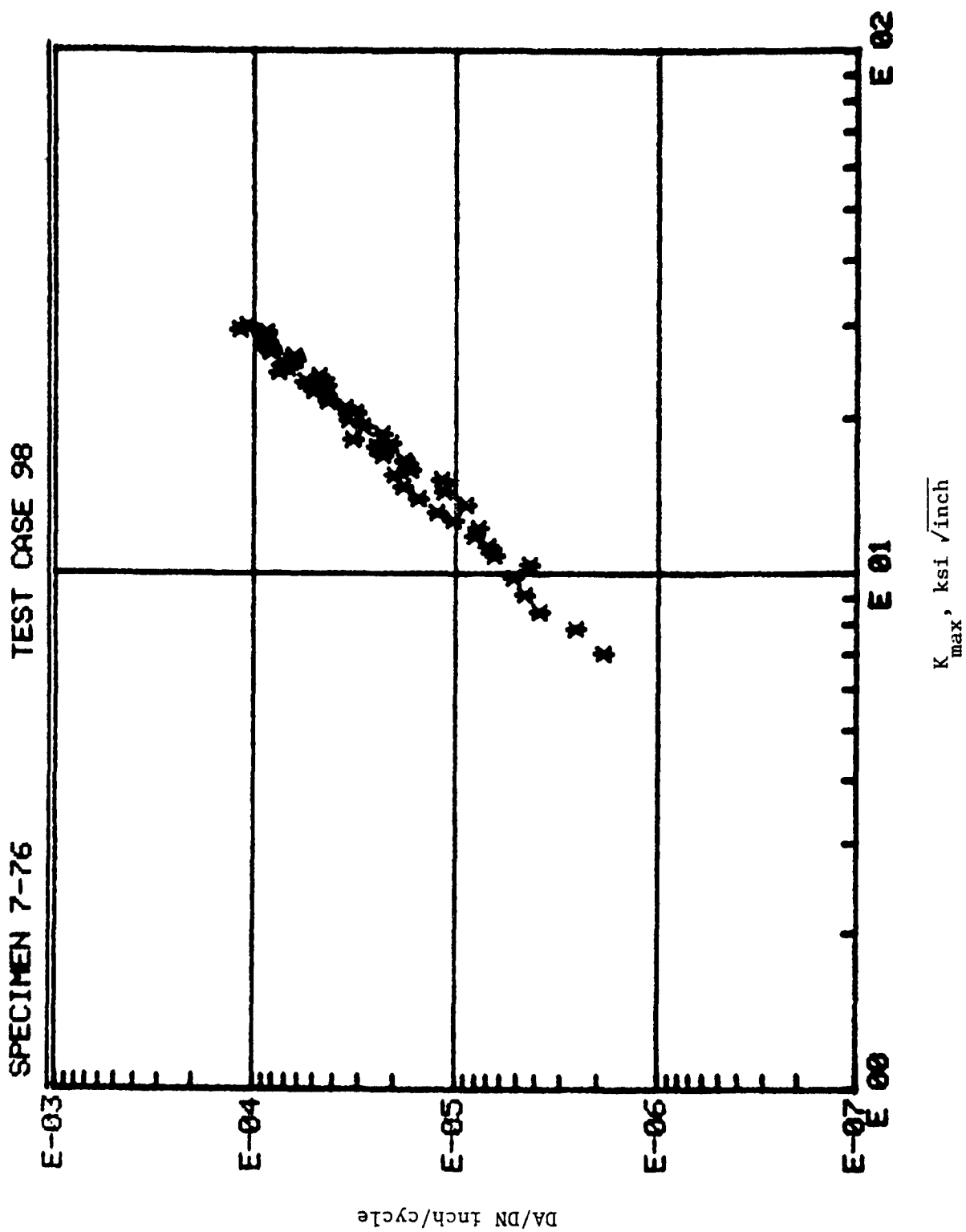




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CRACK GROWTH TEST OF 7075-T7 TEST CASE 98 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-75 FLAW TYPE - 1  
TEMP = 75 F REL HUM = 55% 5-4-78  
B = .174 IN R(L) = .1 R(T) = 1  
FREQ = 5 HZ PHASE ANGLE = GRID SPACING = .05 IN  
BIAXIAL RATIO = -.5  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	20.54	-5.49	0	1.9	1.8	180	0
2	20.54	-5.49	18930	2.6	2.5	180	0
3	20.54	-5.49	26850	3	2.9	180	0
4	20.54	-5.49	33380	3.5	3.4	180	0
5	20.54	-5.49	38880	4	3.9	180	0
6	20.54	-5.49	45670	4.7	4.6	180	0
7	20.54	-5.49	49150	5	4.9	181	0
8	20.54	-5.49	53430	5.5	5.5	181	0
9	20.54	-5.49	57040	6	6	181	0
10	20.54	-5.49	60140	6.5	6.5	180	0
11	20.54	-5.49	63030	7	6.9	180	0
12	20.54	-5.49	65450	7.5	7.4	180	-1
13	20.54	-5.49	67670	8	8	181	-1
14	20.54	-5.49	70470	8.5	8.5	181	-1
15	20.54	-5.49	72100	9	9	181	-1
16	20.54	-5.49	74310	9.5	9.5	180	-2
17	20.54	-5.49	75680	10	10	180	-2
18	20.54	-5.49	77830	10.5	10.5	180	-2
19	20.54	-5.49	79070	11	11	181	-2
20	20.54	-5.49	80860	11.5	11.7	180	-2
21	20.54	-5.49	82010	12	12	180	-2
22	20.54	-5.49	83550	12.5	12.6	180	-2
23	20.54	-5.49	84530	13	13	180	-2
24	20.54	-5.49	85840	13.5	13.7	180	-2
25	20.54	-5.49	86650	14	14	180	-2
26	20.54	-5.49	87840	14.5	14.5	180	-2
27	20.54	-5.49	88610	15	15	180	-2
28	20.54	-5.49	90770	16	16	180	-2
29	20.54	-5.49	92500	17	17	180	-2
30	20.54	-5.49	93990	18	18	180	-2
31	20.54	-5.49	95580	19	19	180	-2
32	20.54	-5.49	97010	20	20	180	-2
33	20.54	-5.49	98180	21	21	180	-2
34	20.54	-5.49	99330	22	22	180	-2
35	20.54	-5.49	100330	23	23	180	-2
36	20.54	-5.49	101480	24	24	180	-2
37	20.54	-5.49	102380	25	25	180	-2
38	20.54	-5.49	103440	26	26	180	-2
39	20.54	-5.49	104110	27	27	181	-2
40	20.54	-5.49	104850	28	28	181	-2
41	20.54	-5.49	105560	29	29	180	-2
42	20.54	-5.49	106360	30	30	180	-2
43	20.54	-5.49	107150	31	31	180	-2
44	20.54	-5.49	107750	32	32	180	-2
45	20.54	-5.49	108350	33	33	180	-2
46	20.54	-5.49	108930	34	34	180	-2
47	20.54	-5.49	109460	35	34.9	180	-2
48	20.54	-5.49	110050	36	36	180	-2
49	20.54	-5.49	110620	37	37	180	-2
50	20.54	-5.49	111200	38	38	180	-2

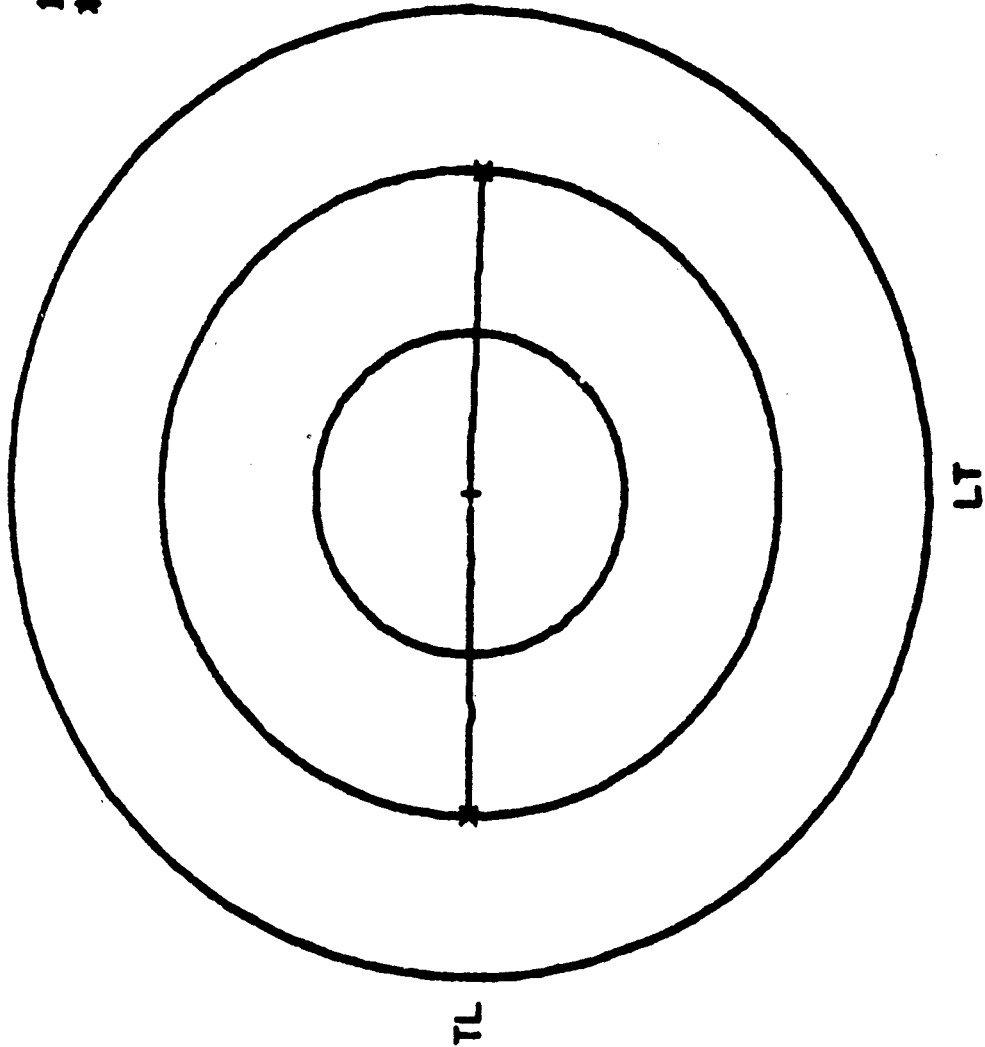
REF #	PCL KIPS	PCT KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	20.54	-5.49	111630	39	39	100	-2
52	20.54	-5.49	112100	40	40	100	-2



SPECIMEN 7-76

TEST CASE 98

1 IN SPACING  
\* TEST STOPPED

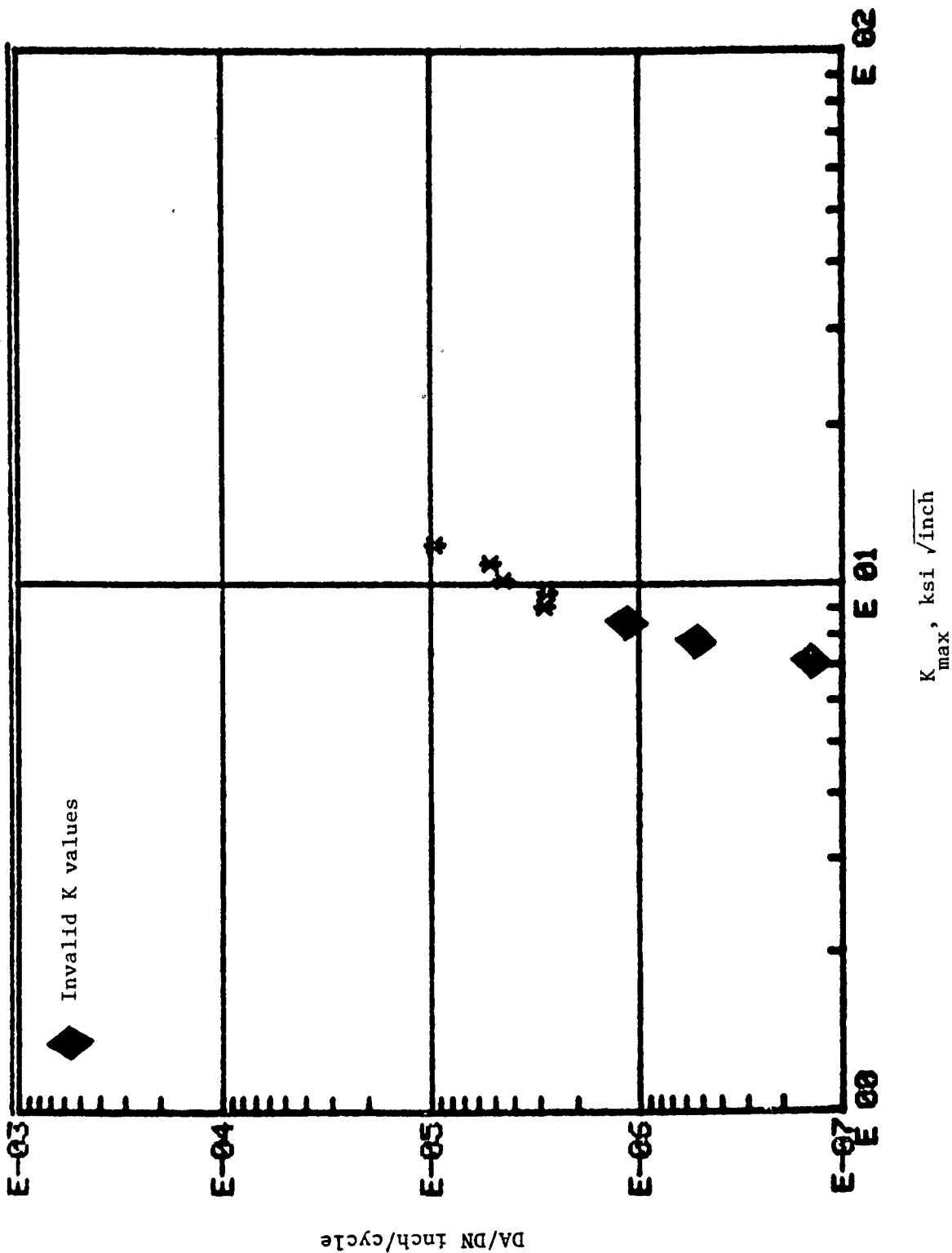


-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 79 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-92 FLAW TYPE - 3  
TEMP = 74 F REL HUM = 56 % 01-16-78  
B = .184 IN R(L) = .1 R(T) = .1  
FREQ = 10 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = 0  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	23.65	6.3	0	2	2	163	-14
2	23.65	6.3	159510	2.5	2.4	166	-12
3	23.65	6.3	210940	3	3	170	-8
4	23.65	6.3	228010	3.5	3.3	171	-8
5	23.65	6.3	237670	4	3.9	173	-7
6	23.65	6.3	244900	4.5	4.2	174	-6
7	23.65	6.3	250460	5	4.7	175	-5
8	23.65	6.3	260630	6.2	5.6	176	-3
9	23.65	6.3	265360	7	6.6	177	-2

# SPECIMEN 7-92 TEST CASE 79

Invalid K values

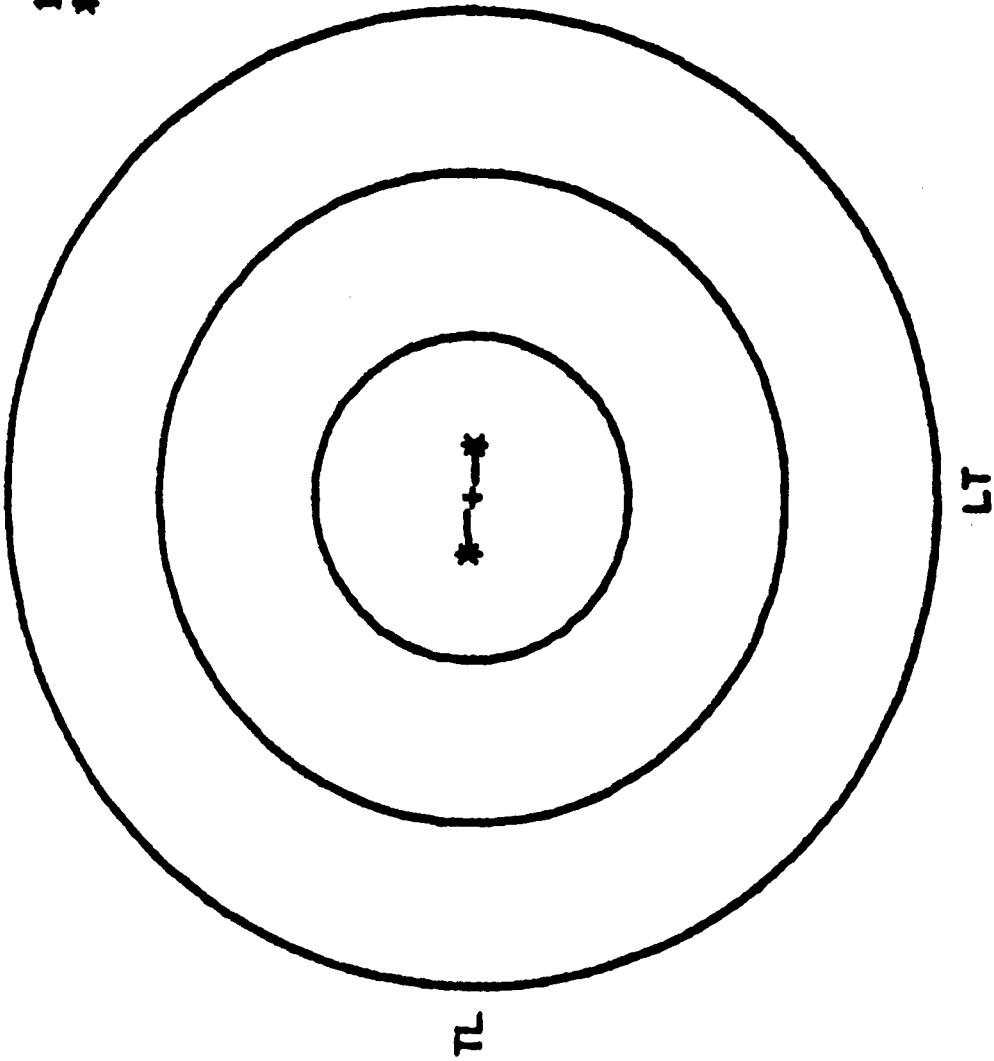




SPECIMEN 7-92

TEST CASE 79

1 IN SPACING  
\* TEST STOPPED



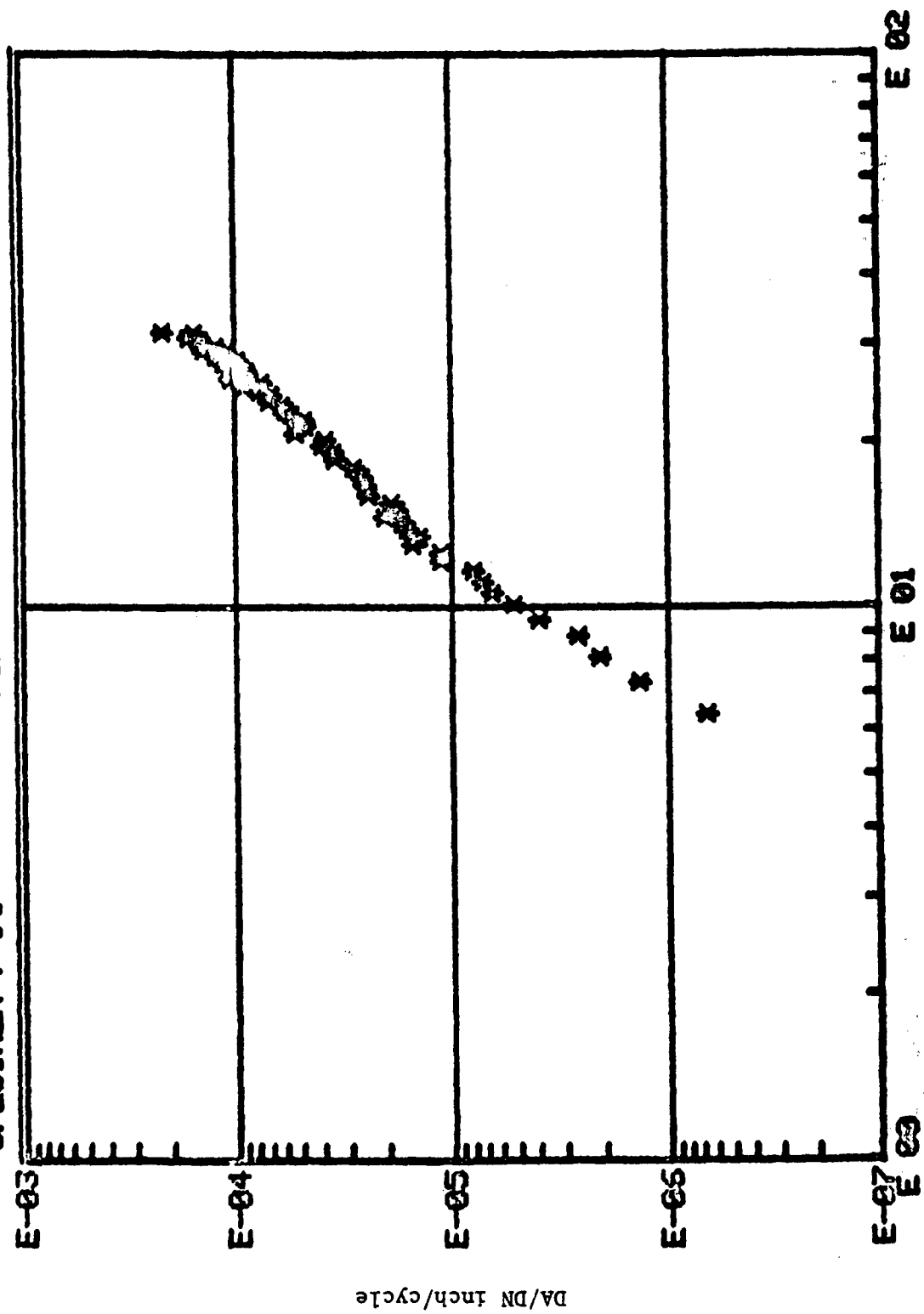
-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 81 PAGE 1  
CRUCIFORM SPECIMEN TYPE SPEC. 7-91 FLAW TYPE - 3  
TEMP = 75 F REL HUM = 50 % 6/29/77  
B = .183 IN R(L) = .1 R(T) = .1  
FREQ = 5 HZ PHASE ANGLE = 0 GRID SPACING = .05 IN  
BIAXIAL RATIO = 1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	29.8	29.8	0	1.1	2	131	-48
2	29.8	29.8	41690	1.7	2.5	132	-48
3	29.8	29.8	62050	2.3	3	134	-48
4	29.8	29.8	75240	2.9	3.5	140	-47
5	29.8	29.8	85830	3.5	4	138	-45
6	29.8	29.8	92810	4.1	4.5	135	-47
7	29.8	29.8	97140	4.5	5	135	-48
8	29.8	29.8	100990	5	5.5	135	-46
9	29.8	29.8	104800	5.6	6	135	-44
10	29.8	29.8	107950	6.1	6.5	136	-43
11	29.8	29.8	110400	6.7	7	137	-42
12	29.8	29.8	112400	7.1	7.5	138	-44
13	29.8	29.8	113890	7.5	8	139	-45
14	29.8	29.8	116020	8.2	8.5	139	-45
15	29.8	29.8	117570	8.7	9	139	-44
16	29.8	29.8	118900	9.1	9.5	139	-45
17	29.8	29.8	120130	9.6	10	139	-45
18	29.8	29.8	121660	10.2	10.5	138	-45
19	29.8	29.8	123100	10.8	11	138	-44
20	29.8	29.8	125150	11.8	12	138	-44
21	29.8	29.8	127060	12.7	13	139	-42
22	29.8	29.8	128980	13.7	14	139	-41
23	29.8	29.8	130740	14.7	15	139	-41
24	29.8	29.8	132190	15.7	16	139	-41
25	29.8	29.8	133620	16.6	17.1	138	-40
26	29.8	29.8	134770	17.5	18	138	-40
27	29.8	29.8	135940	18.3	19	139	-40
28	29.8	29.8	137040	19.5	20.1	140	-39
29	29.8	29.8	137990	20.4	21	139	-39
30	29.8	29.8	138980	21.3	22	139	-39
31	29.8	29.8	139940	22.4	23	140	-39
32	29.8	29.8	140670	23.1	24	141	-38
33	29.8	29.8	141500	24.1	25	141	-38
34	29.8	29.8	142260	25.2	26	141	-38
35	29.8	29.8	143040	26.3	27	141	-37
36	29.8	29.8	143630	27.1	28	141	-38
37	29.8	29.8	144150	28	29	141	-37
38	29.8	29.8	144880	29.1	30.1	141	-37
39	29.8	29.8	145290	29.9	31	141	-37
40	29.8	29.8	145860	30.9	32	141	-37
41	29.8	29.8	146340	31.6	33	141	-37
42	29.8	29.8	146870	32.8	34	142	-36
43	29.8	29.8	147360	34	35	142	-36
44	29.8	29.8	147880	35	36	142	-35
45	29.8	29.8	148330	36.2	37	142	-35
46	29.8	29.8	148770	37.1	38	142	-35
47	29.8	29.8	149130	38.1	39	142	-35
48	29.8	29.8	149520	39	40	142	-35
49	29.8	29.8	149890	40.1	41	142	-35
50	29.8	29.8	150270	41.3	42	142	-34

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
51	29.8	29.8	150610	42.5	43	141	-34
52	29.8	29.8	150920	43.4	44	141	-34
53	29.8	29.8	151140	44.3	45	142	-34

# TEST CASE 81

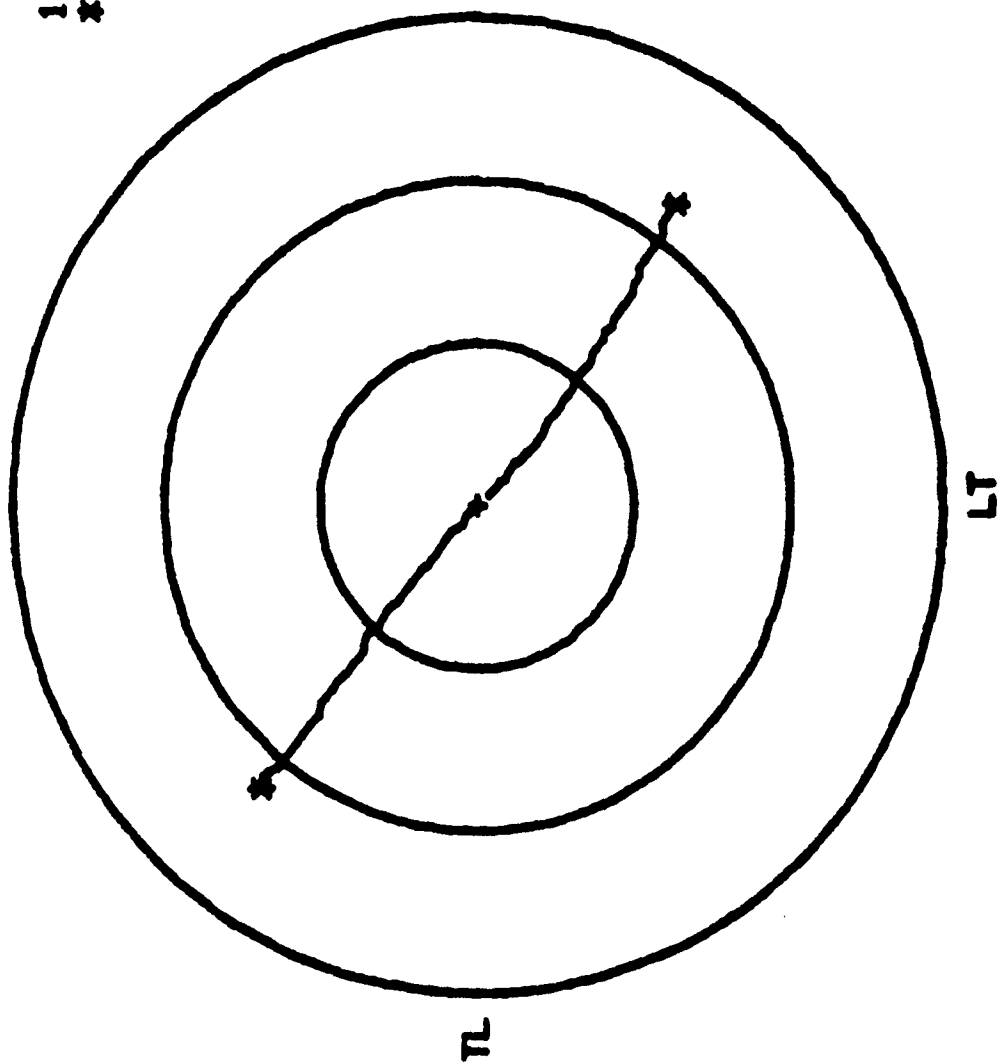
SPECIMEN 7-91



SPECIMEN 7-91

TEST CASE 81

1 IN SPACING  
\* TEST STOPPED



-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 83 PAGE 1  
-----

CRUCIFORM SPECIMEN TYPE SPEC. 7-5 FLAW TYPE - 3  
-----

TEMP = 76 F

REL HUM = 46 %

87-15-77  
-----

B = .175 IN

R(L) = .1

R(T) = .1  
-----

FREQ = 5 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN  
-----

BIAXIAL RATIO = -1  
-----

REF #	P(L) KIPS	P(T) KIPS	TOTAL CYCLES	GRID LEFT	GRID RIGHT	ANGLE LEFT	ANGLE RIGHT
1	17.4	-17.4	0	2.6	2.5	194	12
2	17.4	-17.4	102650	2.9	2.8	193	11



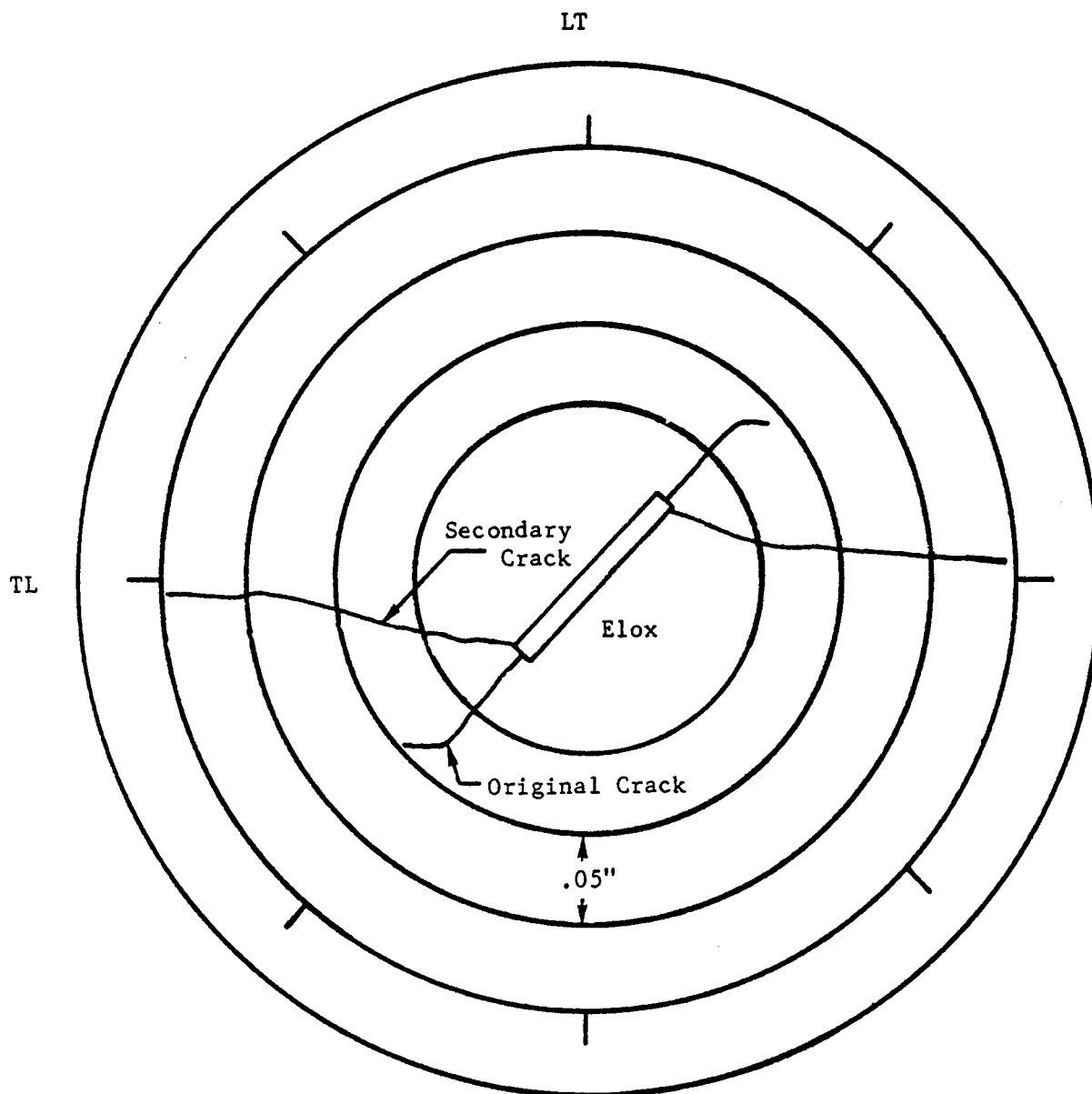
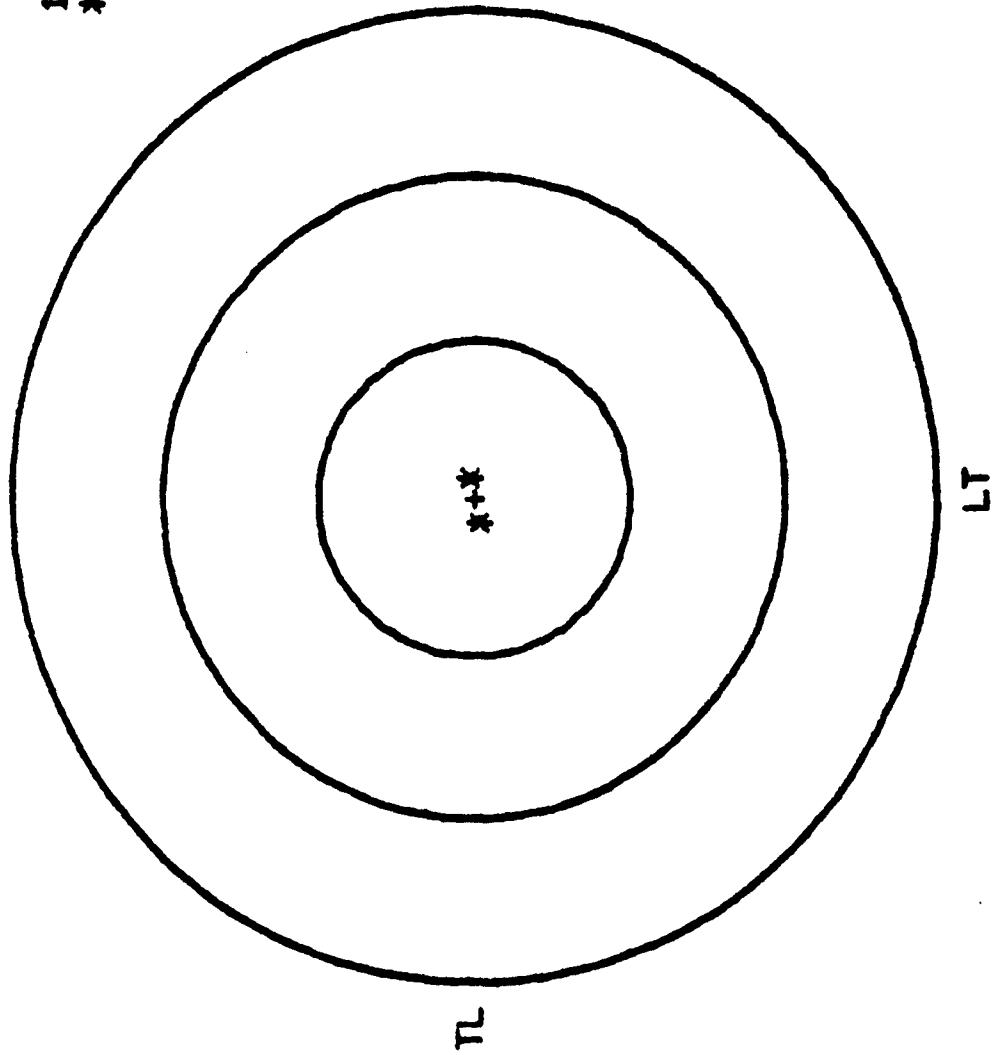


Figure 55. Sketch of a Crack Growth Profile of 7075-T7351  
 Cruciform Specimen No. 7-5  
 Test Case No. 83, Angle Crack  
 $\sigma_x = -\sigma_y = -12$  ksi,  $R = 0.1$ ,  $f = 5$  Hz

SPECIMEN 7-5

TEST CASE 83

1 IN SPACING  
\* TEST STOPPED



*TEST CASE 150*

-----  
CRACK GROWTH TEST OF 7075-T7 TEST CASE 150 PAGE 1

CRUCIFORM SPECIMEN TYPE SPEC. 7-27 FLAW TYPE - 1

TEMP = 72 F

REL HUM = 53 %

3/12/78

B = .179 IN

R(L) = 1

R(T) = 1

FREQ = 0 HZ

PHASE ANGLE = 0

GRID SPACING = .05 IN

BIAXIAL RATIO = -.267  
-----

R-CURVE TEST: PRECRACKED TO  $A=0.146"$  -- NO STATIC  
GROWTH AT MAX SYSTEM LOAD OF 76.4 KIPS; PRECRACKED TO  
 $A=2.10"$  -- MINIMAL CRACK EXTENSION OBSERVED. DISCONTINUED  
TEST DUE TO LACK OF LOADING CAPACITY.

## TEST CASE 123

---

R - CURVE RESULTS FOR CCT SPECIMEN LT-7-4

7075-T7

4/26/77

E = 10250 KSI

YIELD = 59.8 KSI

W = 7 IN

B = .179 IN

TEMP = 76 F

REL HUM = 55 %

---

PAGE 1

---

\*\*\*\*\*

INITIAL CRACK LENGTH = 1.01875 IN

REF #	LOAD KIPS	DELTA A OPT MILS	EBV/P NORM	DELTA A-EFF MILS	A-EFF IN	K-EFF KSI IN <sup>2</sup> .5	STRESS NOM. KSI
0	0	0	.6623	0	1.0187	0	0
1	22.8	0	.6788	21	1.0401	34.8	25.8
2	27.6	0	.6861	34	1.0533	42.4	31.5
3	32.6	7	.6972	50	1.0688	50.6	37.4
4	36.3	13	.7027	58	1.0771	56.6	41.8
5	40	41	.7247	92	1.1107	63.6	46.7
6	42.4	92	.7522	128	1.1468	68.8	50.3
7	44.3	127	.7733	157	1.1759	73.1	53.2
8	45.9	177	.799	193	1.2119	77.2	56.7 ?
9	46.9	241	.8483	249	1.2682	81.4	58.7 ?
10	47.3	299	.8971	323	1.3421	85.3	61.2 ?
11	46.7	372	.9595	403	1.4219	87.8	62.7 ?
12	45.3	475	1.0513	514	1.5336	90.2	64.3 ?

22 - NET SECTION YIELDING PRESENT

E 02 SPECIMEN LT-7-4

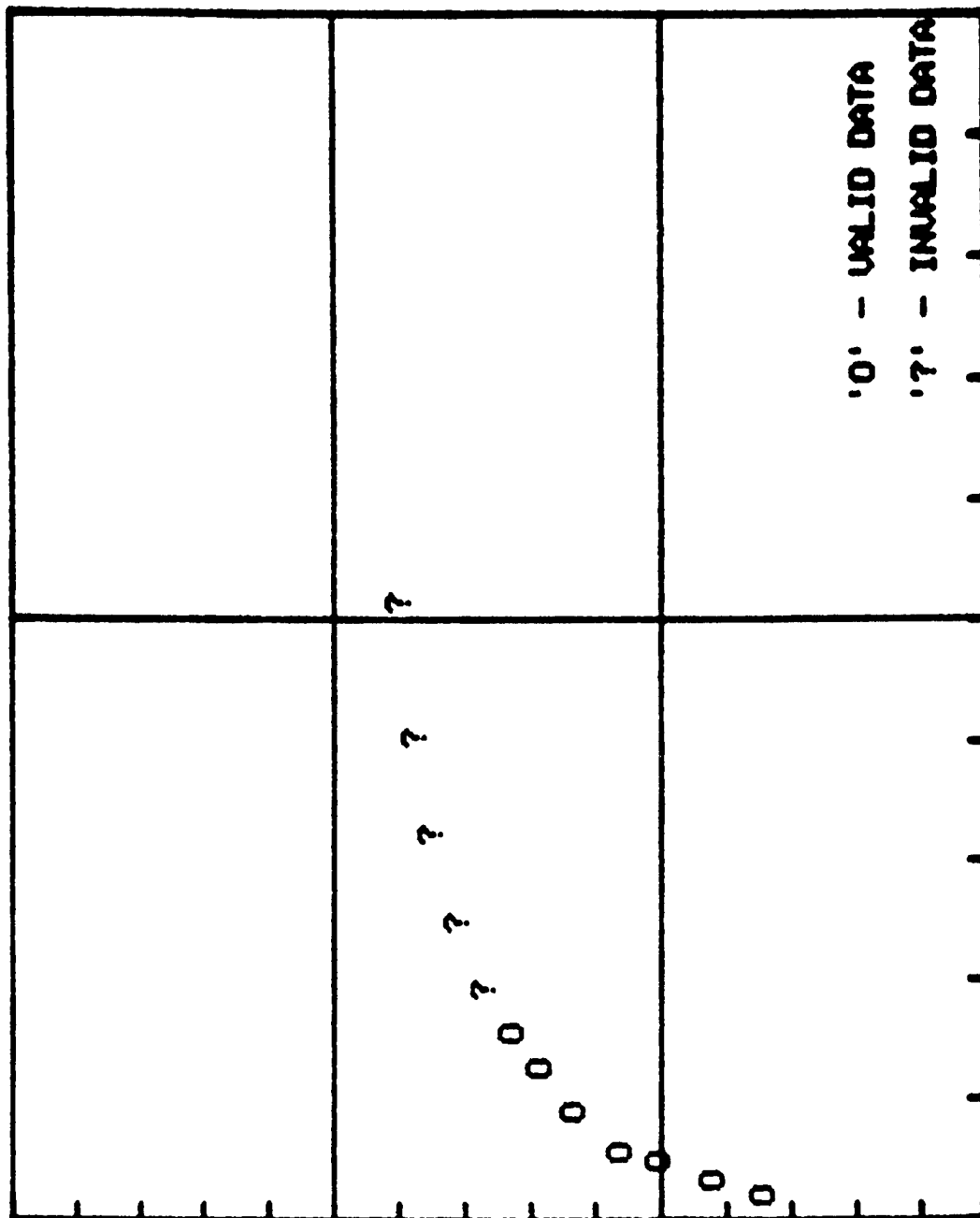
1.50

1.00

0.50

0.00 0.00

$K_{eff}$ , ksi  $\sqrt{\text{inch}}$



$\Delta a_{eff}$ , inch

1.00  
E 00

## TEST CASE 125

---

R - CURVE RESULTS FOR OCT SPECIMEN TL-7-1

7075-T7

5/04/77

E = 10600 KSI

YIELD = 55.8 KSI

W = 7.01 IN

B = .178 IN

TEMP = 76 F

REL HUM = 55 %

PAGE 1

---

\*\*\*\*\*

INITIAL CRACK LENGTH = .98875 IN

REF #	LOAD KIPS	DELTA A OPT MILS	EBV/P NORM	DELTA A-EFF MILS	A-EFF IN	K-EFF KSI INCHES	STRESS NOM. KSI
0	0	0	.6726	0	.9887	0	0
1	24.4	0	.6849	17	1.0066	36.6	27.4
2	29.5	2	.6962	34	1.023	44.7	33.3
3	34.4	14	.7179	65	1.0539	53.1	39.4
4	37.9	52	.7433	100	1.0896	59.8	44
5	39.8	96	.7745	144	1.1335	64.3	47.1
6	40.7	161	.8047	185	1.1745	67.3	49

2' - NET SECTION YIELDING PRESENT



# SPECIMEN TL-7-1

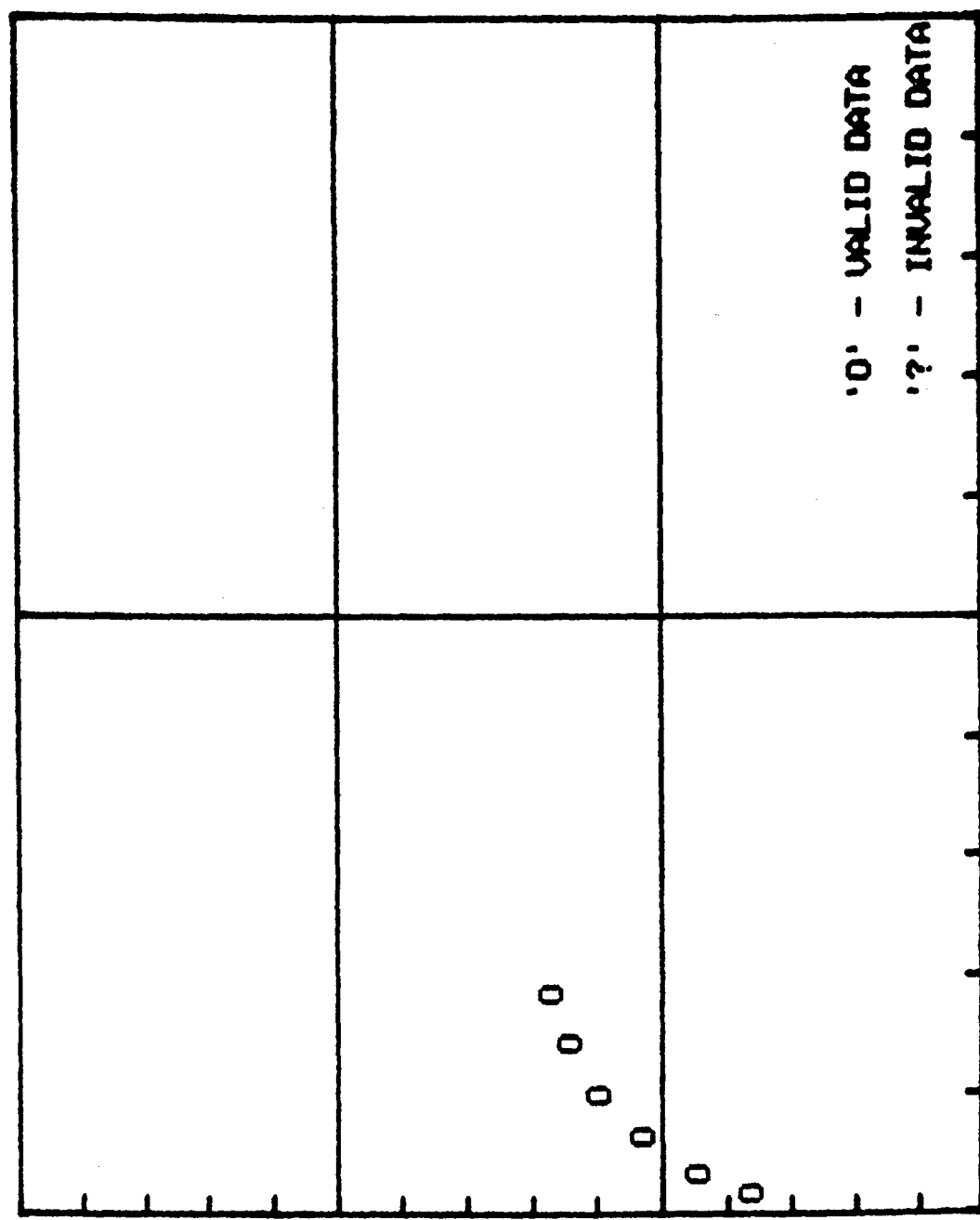
E 02  
1.50

1.00

0.50

0.00  
0.00

$K_{eff}$ , ksi  $\sqrt{\text{inch}}$



'0' - VALID DATA  
'?' - INVALID DATA

1.00  
E 00

$\Delta a_{eff}$ , inch

## TEST CASE 127

---

R - CURVE RESULTS FOR CCT SPECIMEN LT-2-2

2024-T3

4/28/77

E = 10250 KSI

YIELD = 53.3 KSI

W = 7 IN

B = .18 IN

TEMP = 75 F

REL HUM = 50 %

PAGE 1

---

\*\*\*\*\*

INITIAL CRACK LENGTH = 968125 IN

REF #	LOAD KIPS	DELTA A OPT MILS	EBV/P NORM	DELTA A-EFF MILS	A-EFF IN	K-EFF KSI IN <sup>2</sup> 5	STRESS NOM KSI
0	0	0	.6236	0	.9681	0	0
1	24.8	0	.6236	0	.9681	36	27.2
2	29.3	0	.6272	3	.9712	42.6	32.1
3	34.2	8	.642	27	.9957	50.5	37.9
4	38.5	15	.6439	39	1.008	57.3	42.9
5	41.2	23	.6549	57	1.0251	61.9	46.2
6	44.2	38	.6697	77	1.0458	67.3	50 ?
7	46.5	64	.6826	97	1.0657	71.6	53 ?
8	46.9	89	.6992	128	1.0969	73.6	54.2 ?
9	47.3	121	.725	186	1.155	76.7	56 ?
10	46.1	209	.7804	281	1.2498	78.7	56.9 ?
11	44.5	340	.8634	337	1.3051	78.3	56.3 ?

'?' - NET SECTION YIELDING PRESENT

# SPECIMEN LT-2-2

E 02  
1.50

1.00

$K_{eff}$ , ksi  $\sqrt{\text{inch}}$

0.50

0.00  
0.00

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$\Delta a_{eff}$ , inch

0.50

1.00  
E 00

'0' - VALID DATA  
'?' - INVALID DATA

## TEST CASE 129

---

R - CURVE RESULTS FOR CCT SPECIMEN TL-2-3

2024-T3

5/05/77

E = 10300 KSI

YIELD = 46.3 KSI

W = 7.02 IN

B = .179 IN

TEMP = 77 F

REL HUM = 56 %

---

PAGE 1

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\*\*\*\*\*

INITIAL CRACK LENGTH = 1.34375 IN

REF #	LOAD KIPS	DELTA A OPT MILS	EBV/P NORM	DELTA A-EFF MILS	A-EFF IN	K-EFF KSI INCL 5	STRESS NOM. KSI
0	0	0	.8711	0	1.3437	0	0
1	18.7	0	.8831	16	1.3602	33.9	24.2
2	23.2	0	.8969	32	1.3767	42.5	30.3
3	26.6	11	.8969	32	1.3767	48.7	34.8
4	29	27	.9107	52	1.396	53.6	38.3
5	31.2	41	.92	64	1.4083	58.1	41.4
6	32	52	.9319	78	1.4223	60	42.8 ?
7	33.2	68	.9495	101	1.4451	63	44.9 ?
8	33.8	86	.9707	127	1.4715	65	46.3 ?
9	34.5	133	.9955	159	1.5027	67.4	48 ?
10	35	176	1.0186	186	1.5304	69.4	49.3 ?
11	35	207	1.0628	239	1.5834	71.2	50.7 ?
12	34.2	274	1.1117	296	1.6403	71.7	51 ?
13	34.3	313	1.1504	340	1.6838	73.5	52.4 ?
14	33.8	383	1.1993	394	1.7382	74.4	53.2 ?
15	32	501	1.2776	476	1.8204	73.5	52.9 ?

' ? ' - NET SECTION YIELDING PRESENT

# SPECIMEN TL-2-3

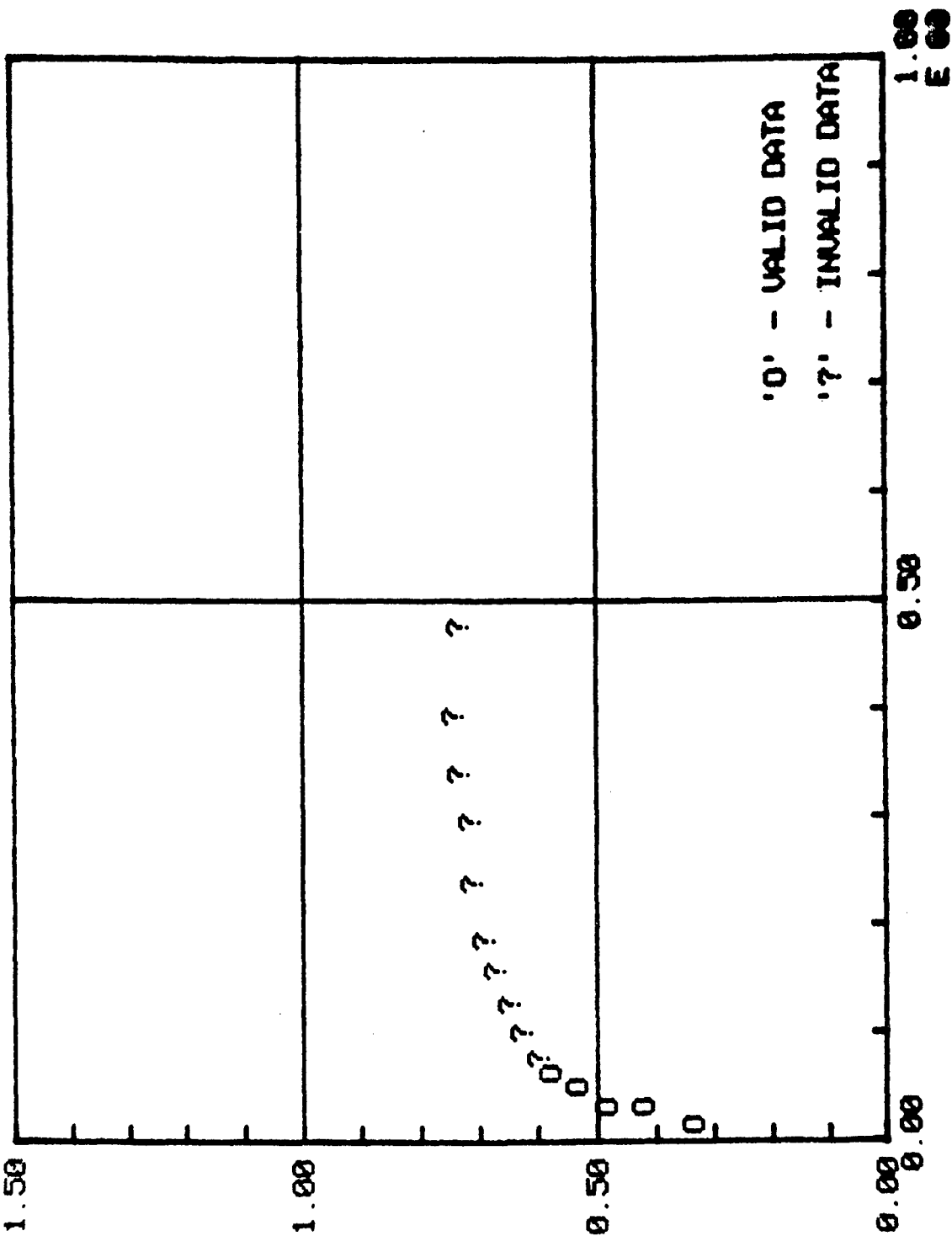
E 02  
1.50

1.00

0.50

0.00 0.00

$K_{eff}$ , ksi  $\sqrt{\text{inch}}$



$Aa_{eff}$ , inch

TABLE 7. TENSILE TEST RESULTS FOR 7075-T7351 LT  
(STROKE RATE = 0.001 INCH/SEC Temp = 75F)

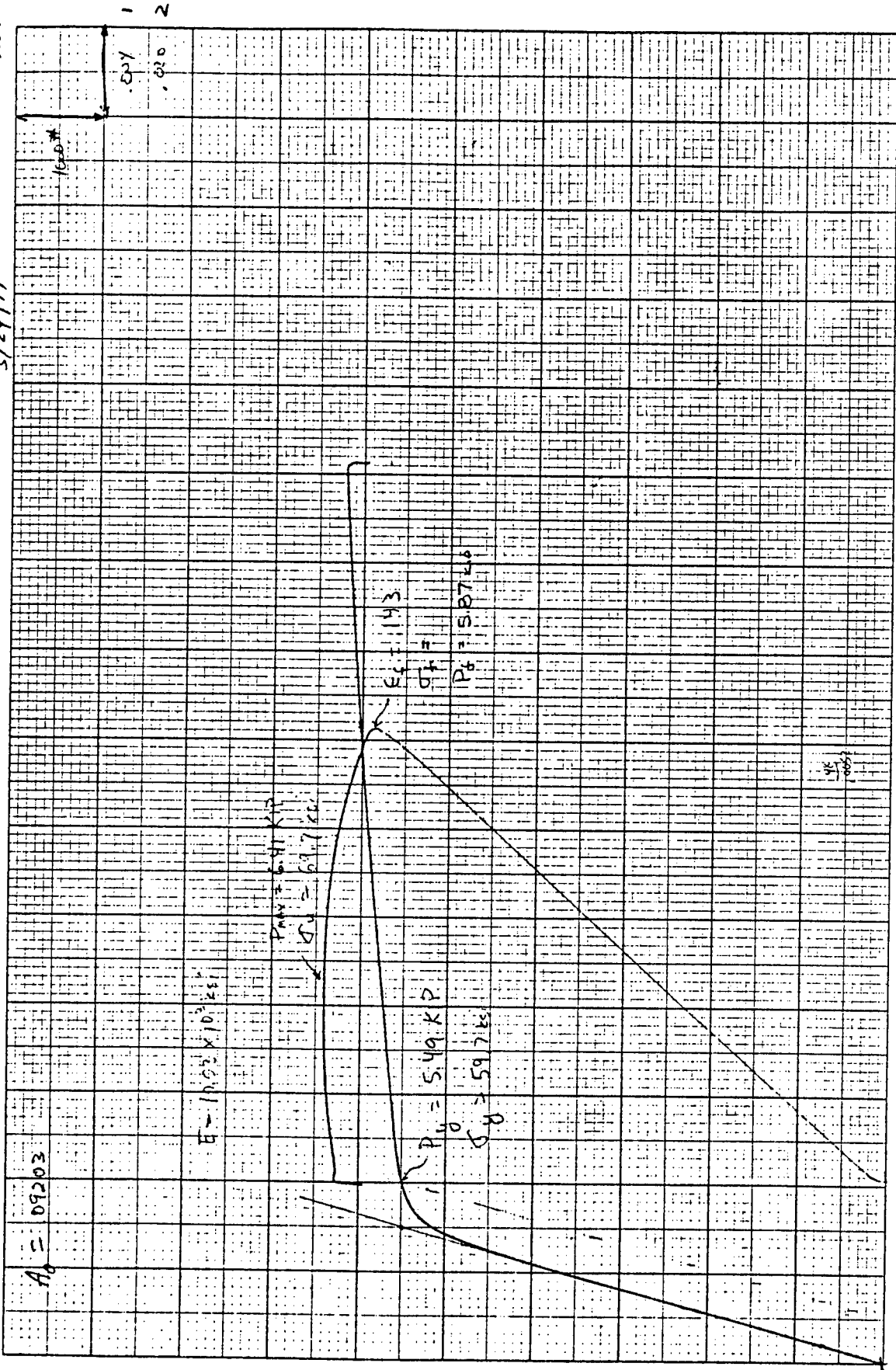
SPEC I.D.	INIT AREA IN <sup>2</sup>	FINAL AREA IN <sup>2</sup>	LOAD AT FRACTURE KIPS	ELASTIC MODULUS KSI	YIELD STRESS KSI	ULTIMATE STRESS KSI	ELONG /INCH %	RED. AREA %	TRUE FRAC STRENGTH KSI
LI-7-1	.09203	.0735	5.87	10030	59.7	69.7	14.3	20.1	79.8
LI-7-2	.09185	.0749	5.85	10340	59.8	69.6	13.1	18.4	78.1
LI-7-3	.09235	.075	6.07	10660	60.9	70.7	12.3	18.7	80.9
LI-7-4	.0925	.0722	5.93	10640	59.7	69.5		21.9	82.1
LI-7-7	.0918	.0698	5.87	9990	60.3	70.8	14.4	23.9	84
LI-7-8	.0923	.0687	5.72	10060	59	69.7		25.5	83.2
LI-7-11	.09188	.0693	5.75	10370	59.4	68.8	14.8	24.5	82.9
LI-7-12	.09208	.074	5.87	10080	59.3	69.4	14.1	19.6	79.3
LI-7-13	.0918	.0726	5.85	10210	59.7	70.5	14.5	20.9	80.5
LI-7-14	.0921	.0701	5.86	10440	60.6	70.9	14.1	23.8	83.5
LI-7-17	.09208	.0728	5.92	10230	60.5	70.8	14.2	20.9	81.3
LI-7-18	.0924	.0703	5.89	10100	60.9	71.3	13.5	23.9	83.7
LI-7-19	.09248	.0723	5.78	10180	58.8	69.2	14.4	21.8	79.9
LI-7-20	.092	.0726	5.82	10190	59.7	69.6	15.6	21	80.1
LI-7-21	.0917	.0737	5.86	10220	59.8	69.8	12.3	19.6	79.5
				10249	59.8	70	13.9	21.6	81.3



SPEC. LT-7-1

3/24/77

Mc



NEWLETT-PACKARD 8270-1000

SPEC. 2T-7-2

$A_0 = 0.9185$

$E = 10,24 \times 10^3 \text{ ksi}$

$P_{max} = 6.39 \text{ KIP}$

$\sigma_{max} = 69.6 \text{ ksi}$

$P_0 = 5.49 \text{ KIP}$

$\sigma_0 = 59.8 \text{ ksi}$

$\epsilon_c = 131$

$\sigma_f =$

$P_f = 5.85$

21

MG

3/24/77

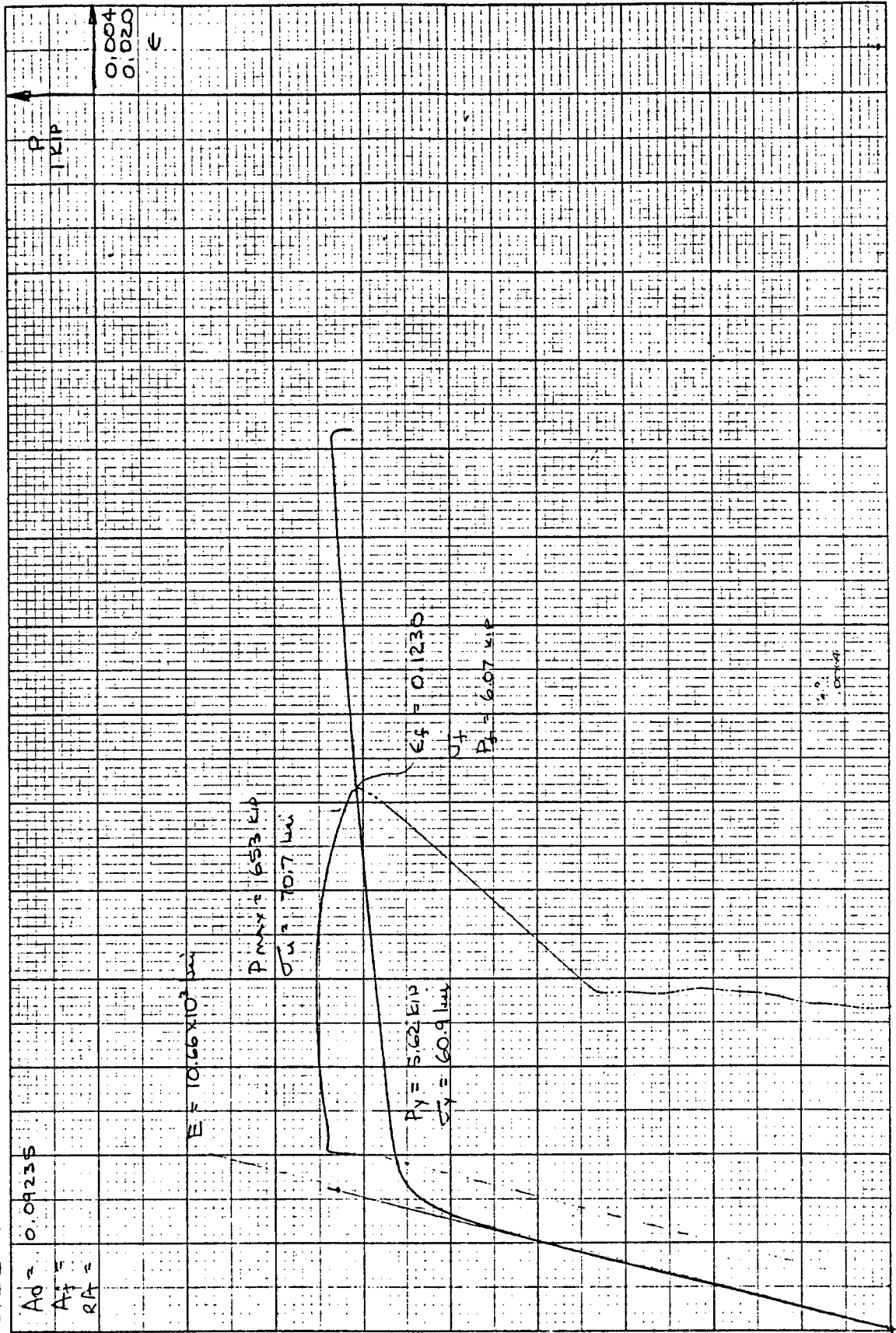
1000 lb

0.034

0.020

3/25/77 D=0

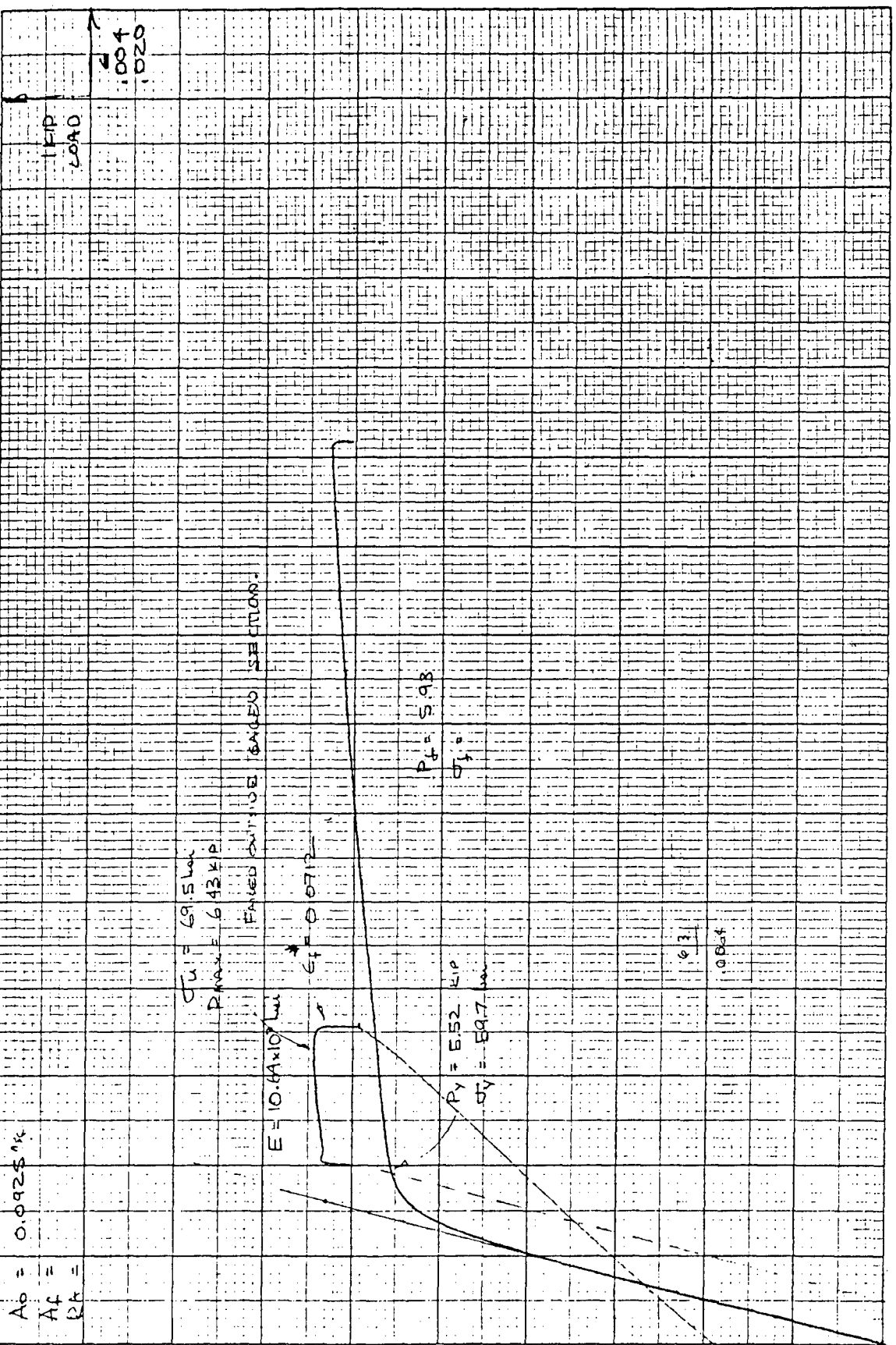
SPEC LT 7-3



HEWLETT-PACKARD 8270-100A

SPEC LT 7nd

3/23/77 DED



SPEC. LT-7-7

8/24/77

MLC

$A_0 = 0.918$

$E = 9.09 \times 10^3 \text{ ksi}$

$P_{max} = 6.5 \text{ kip}$

$\sigma_u = 70.8 \text{ ksi}$

$P_y = 5.94 \text{ kip}$

$\sigma_y = 60.3 \text{ ksi}$

$\epsilon_f = 14\%$

$P_f = 5.87 \text{ kip}$

$\sigma = 1.5 \times 10^6$

1000#

0.004

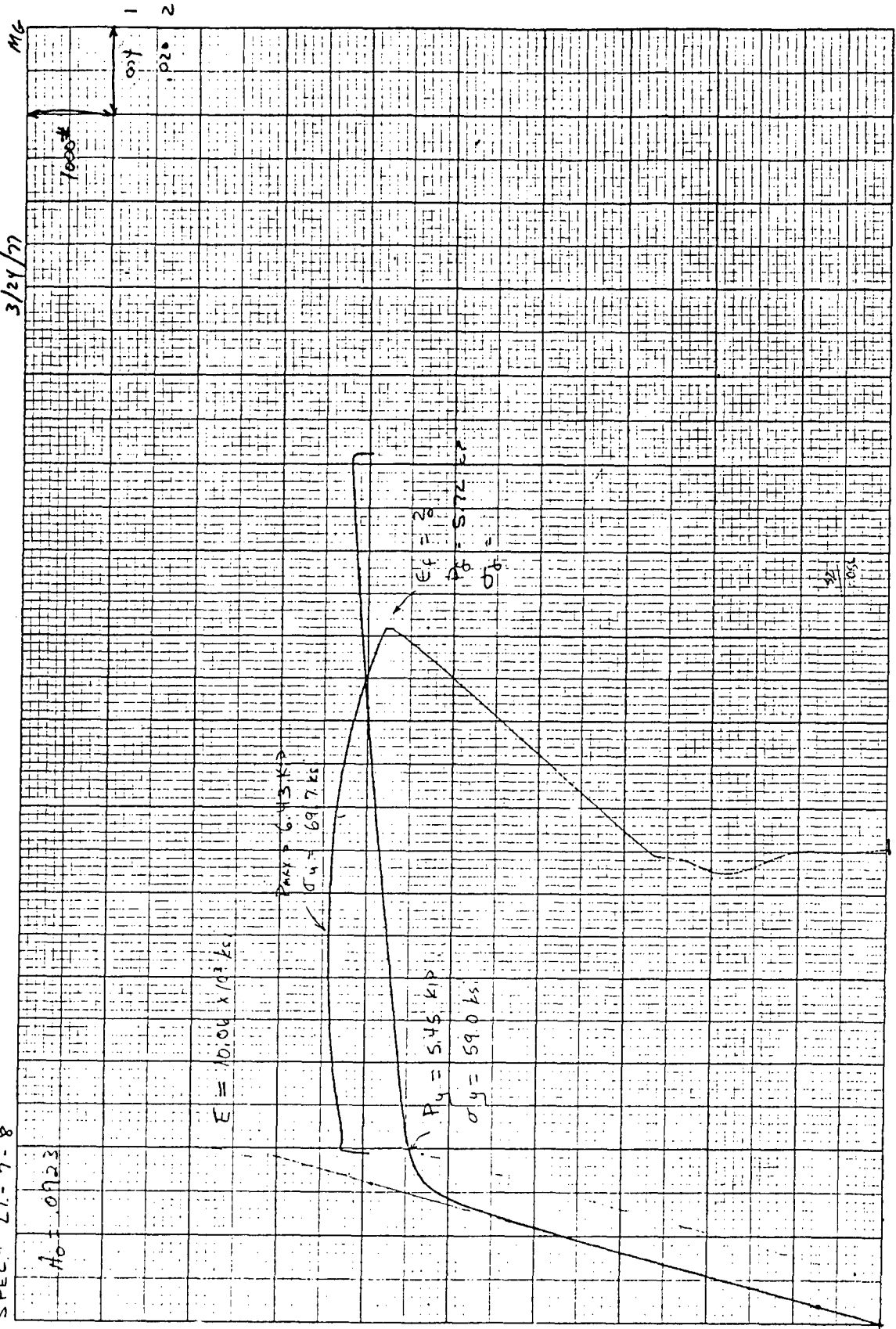
0.020

1

2

SPEC# LT-7-8

3/24/77



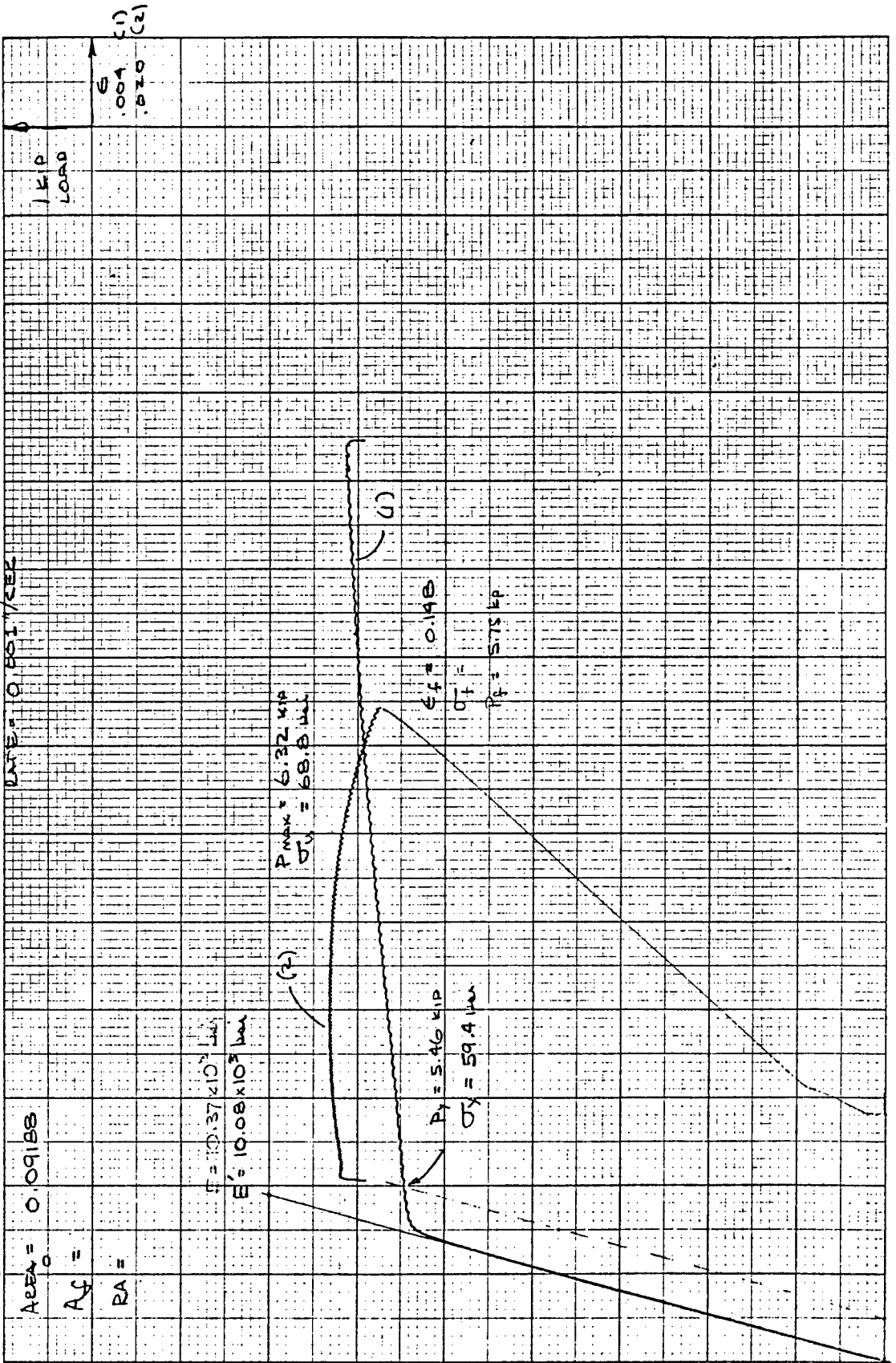
HEWLETT-PACKARD 8270-100A

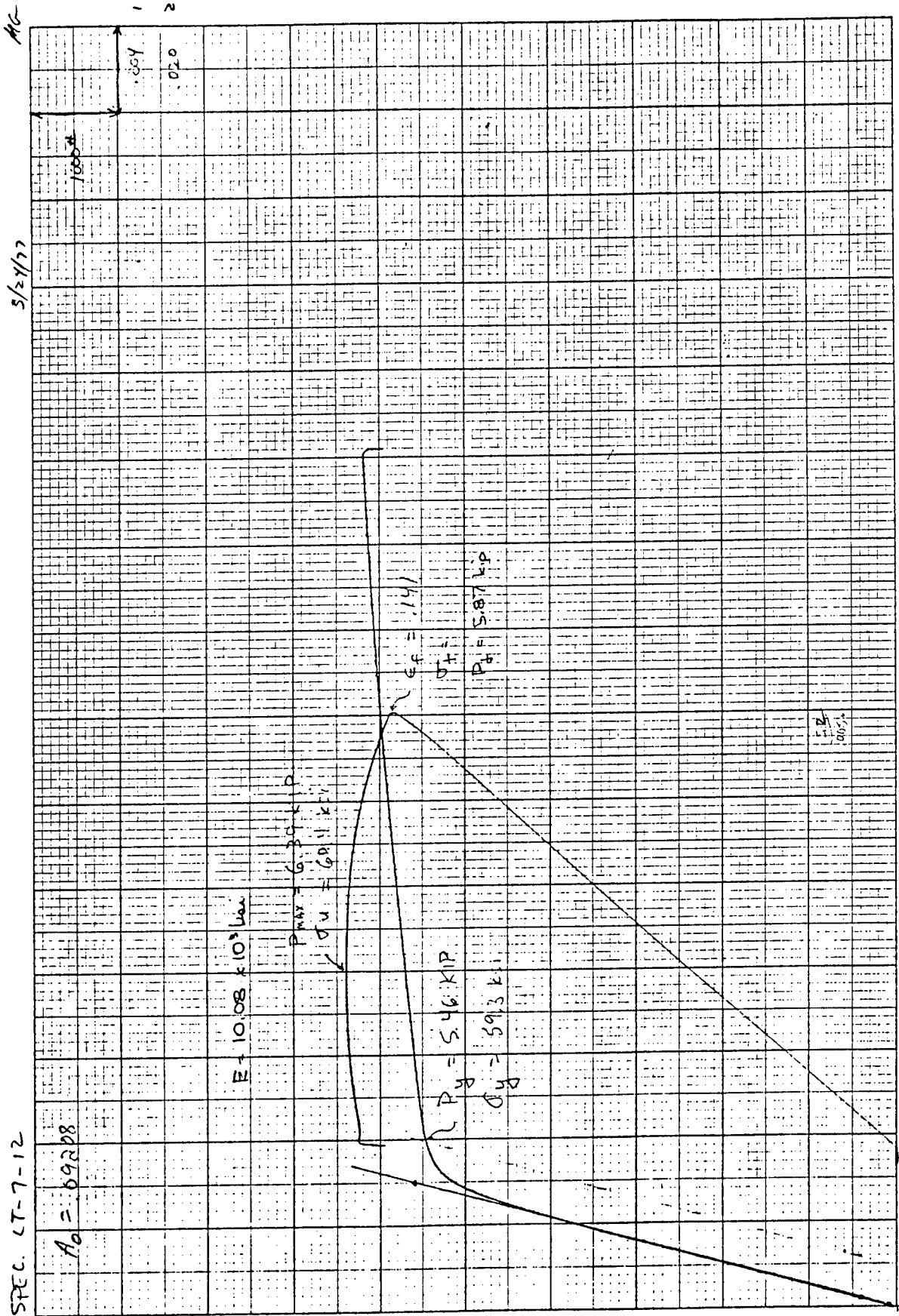
SPEC LT 7-11 (RESTART)

STROKE CONTROL

3/23/77

DFD

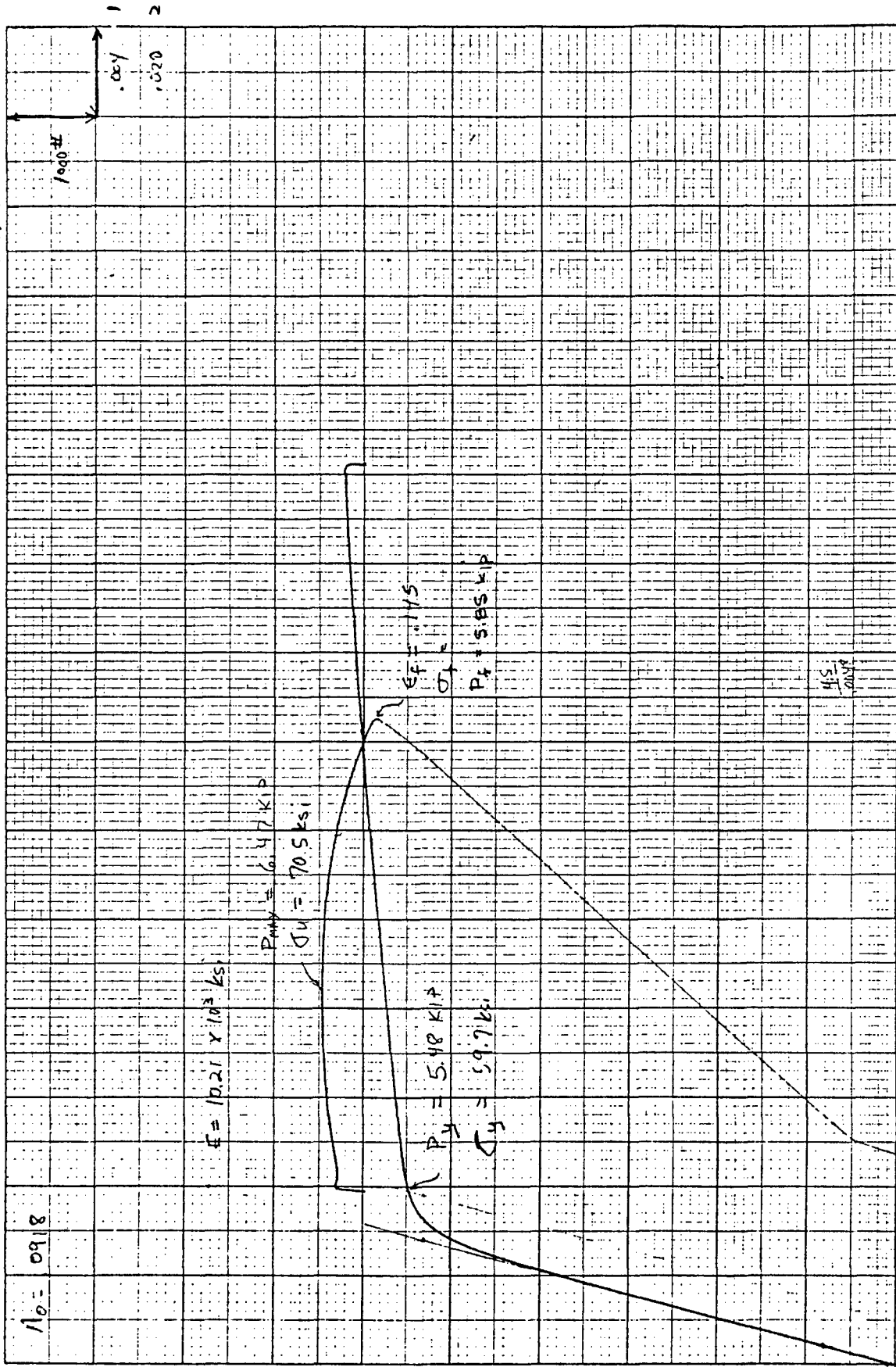






110 = 0918

24



SPEC. LT-7-14

$A_0 = .0521$

$E = 10.44 \times 10^3 \text{ psi}$

$P_{MAX} = 6.53 \text{ KIP}$

$\sigma_u = 70.9 \text{ ksi}$

$P_y = 5.58 \text{ KIP}$

$\sigma_y = 60.6 \text{ ksi}$

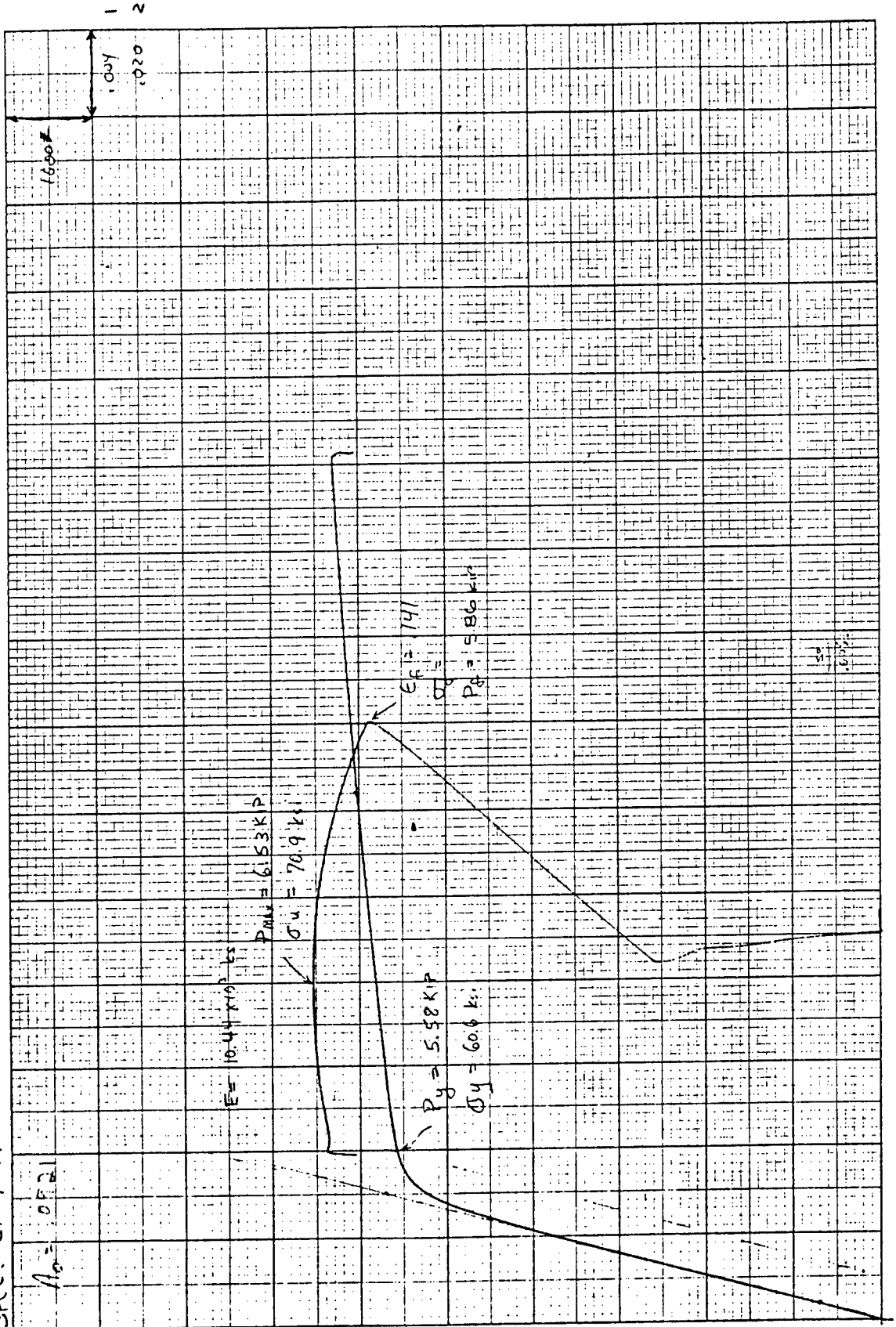
$E_R = 141$

$\sigma_R =$

$P_R = 5.86 \text{ KIP}$

3/24/77

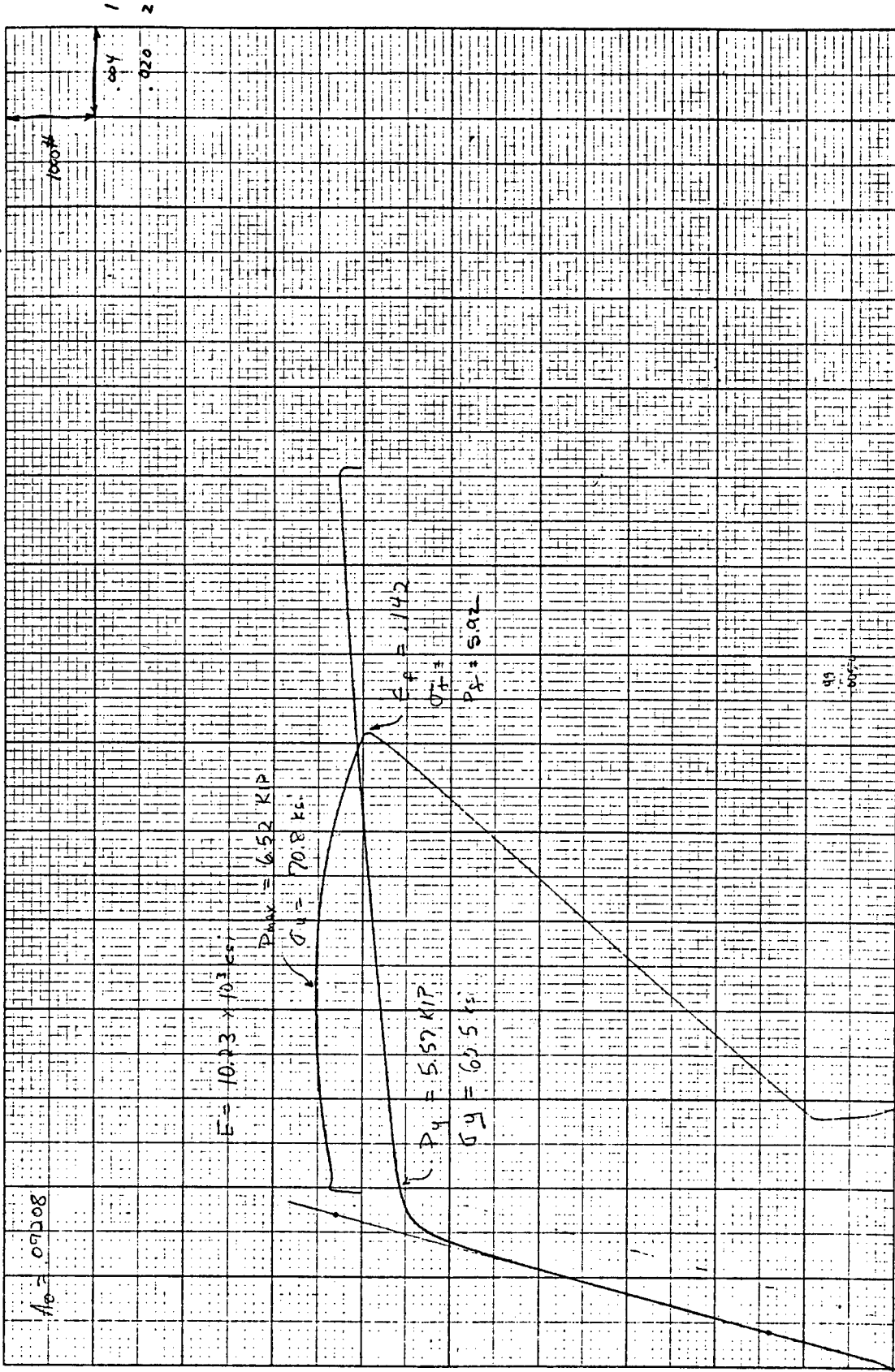
MG



SPEC. LT-7-17

3/24/77

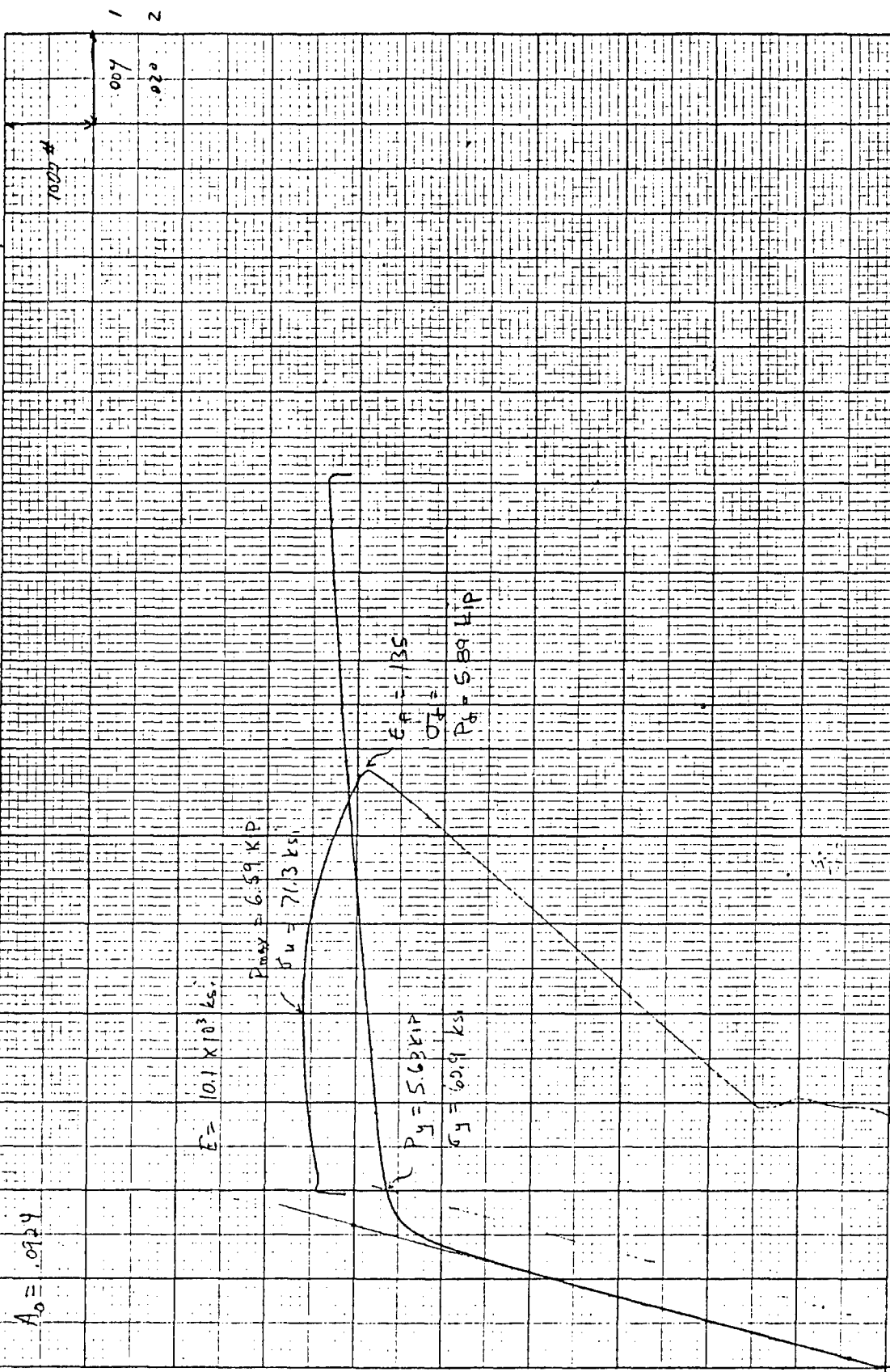
MG



SEC. CT-7-18

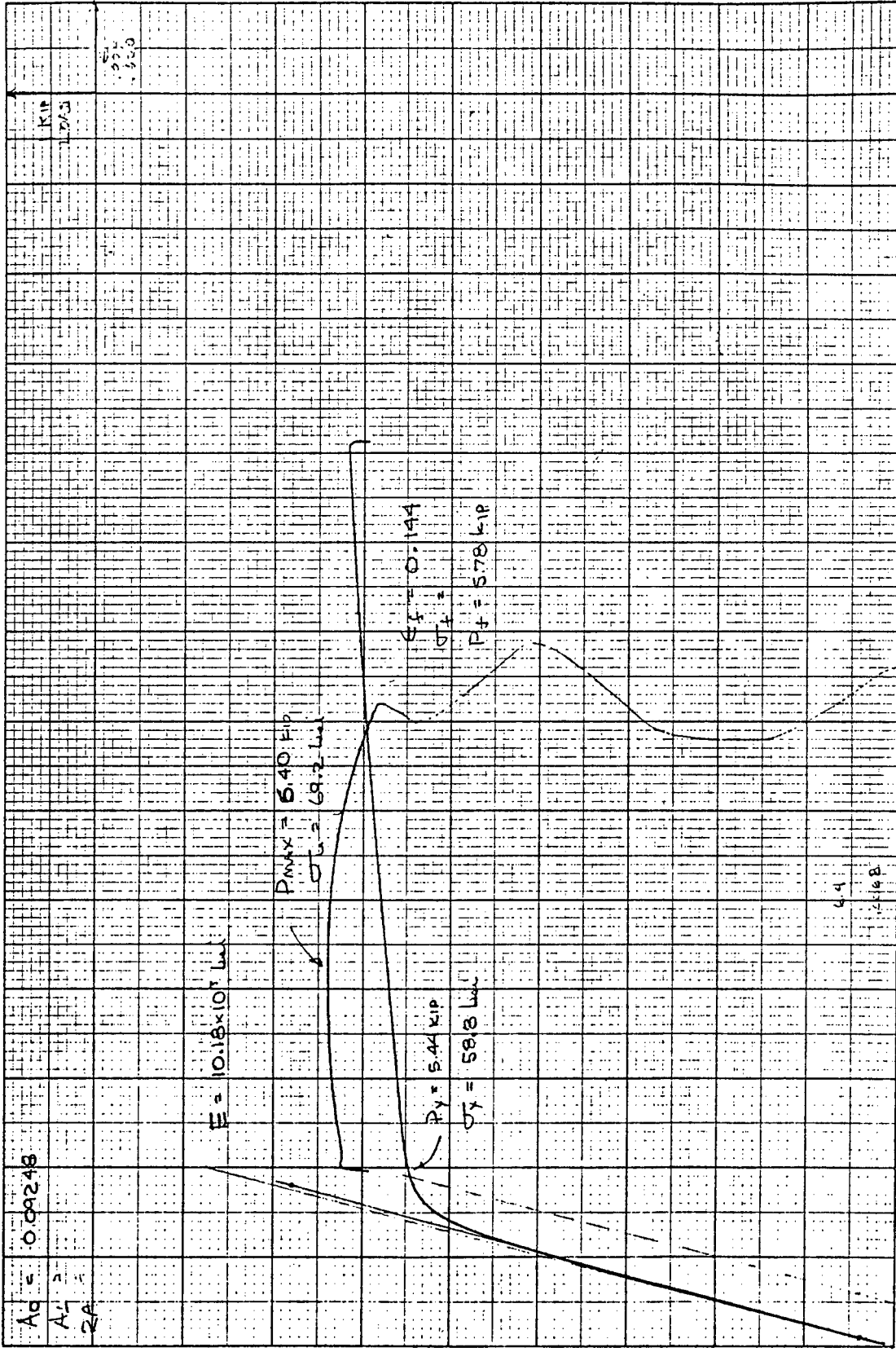
3/24/77

146



3/26/77

LT-7-19



NEWLETT-PACRARD 8878-1000

3/25/77 TC

SEC 45-20

$A_0 = 0.0920$

$A_1 =$

$R_A =$

1030  
0.00

$E = 10.19 \times 10^6 \text{ ksi}$

$P_{max} = 6.40 \text{ kip}$   
 $\Delta u = 69.6 \text{ in.}$

$P_y = 5.49$

$\sigma_y = 59.7 \text{ ksi}$

$E_f = 0.1564$

$U_f =$

$P_f = 5.82 \text{ kip}$

43

45.8

SPEC UT-7-2J

STROKE CONTROL

3/24/77

DFD

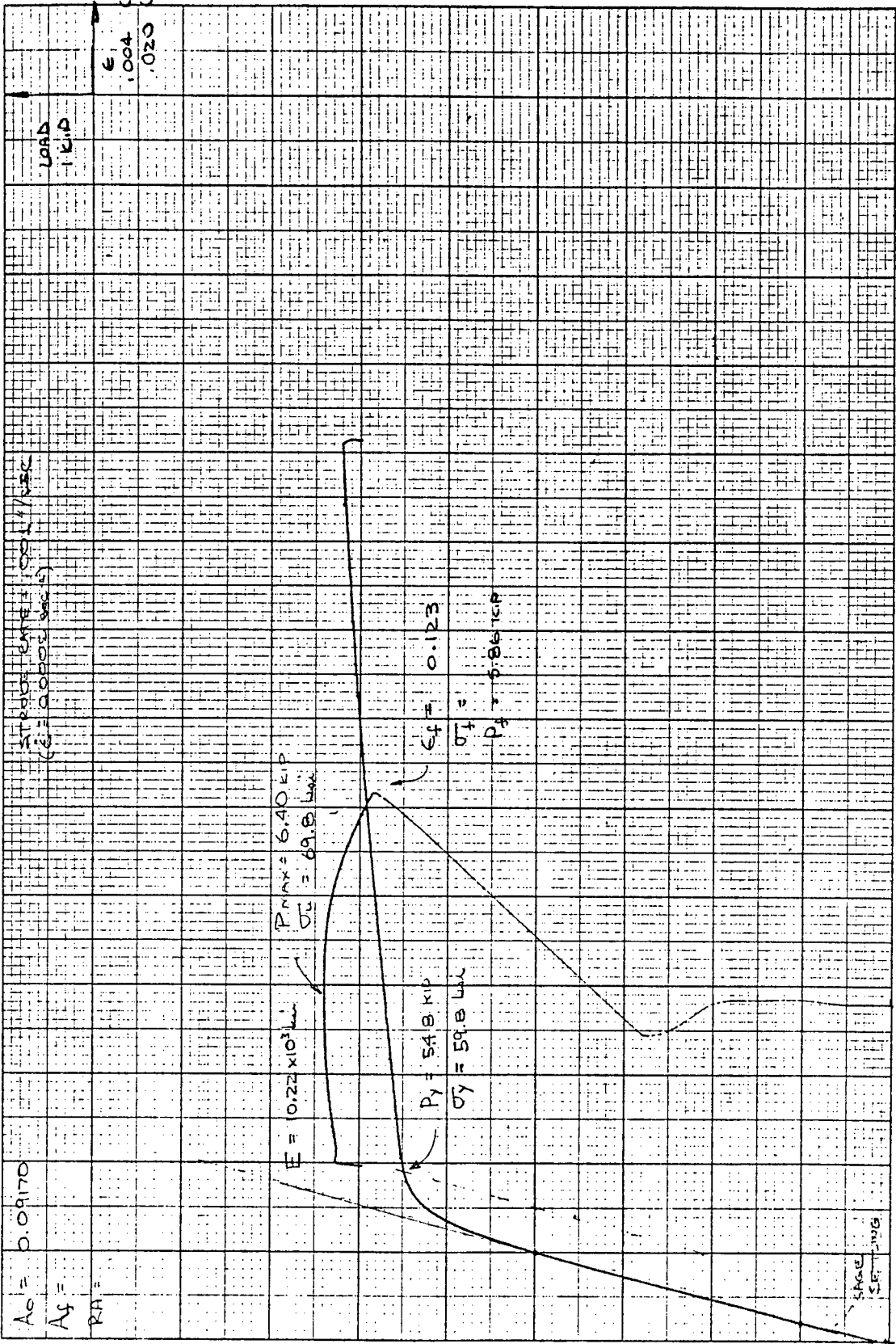


TABLE 8. TENSILE TEST RESULTS FOR 7075-T7351 TL  
(STROKE RATE = 0.001 INCH/SEC Temp = 75F)

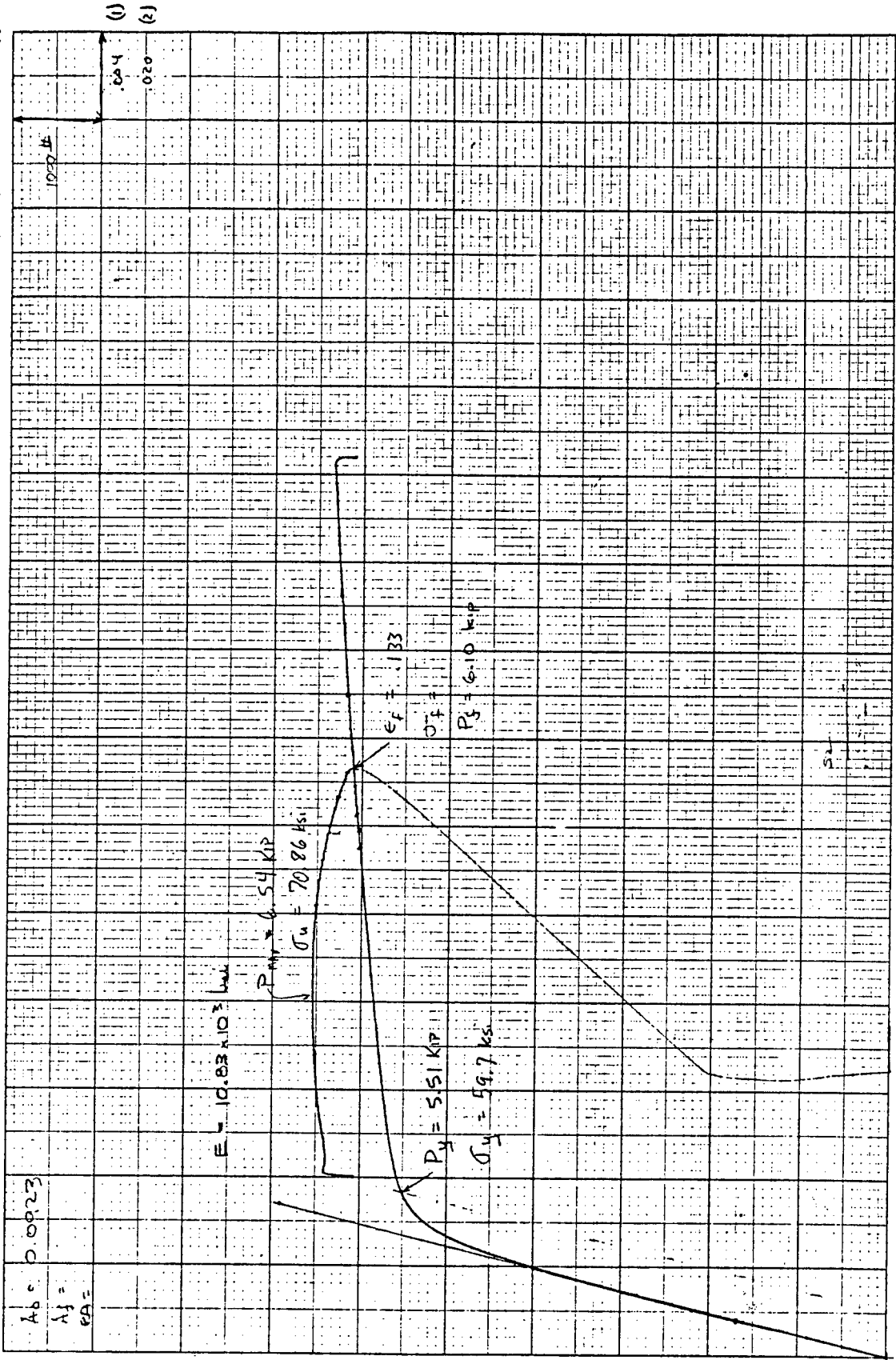
SPEC I.D.	INIT AREA IN <sup>2</sup>	FINAL AREA IN <sup>2</sup>	LOAD AT FRACTURE KIPS	ELASTIC MODULUS KSI	YIELD STRESS KSI	ULTIMATE STRESS KSI	ELONG /INCH %	RED. AREA %	TRUE STRENGTH KSI
TL-7-5	.0923	.0745	6.1	10830	59.7	70.9	13.3	19.2	81.8
TL-7-6	.09185	.0717	6.1	10680	58.9	70.3		21.9	83.6
TL-7-9	.09185	.0742	6.1	10570	60.8	71.8	12.4	19.2	82.2
TL-7-10	.0918	.0735	5.98	10000	59	70.7	15.3	19.9	81.3
TL-7-15	.0919	.0732	6	10460	59.7	70.7	12.2	20.3	81.9
TL-7-16	.09193	.0754	6.1	10880	60.2	70.8	13.8	17.9	80.9
TL-7-22	.0918	.076	6.05	10640	60.5	70.2		17.2	79.6
TL-7-23	.09185	.0758	5.98	10890	60.2	70.2	12.2	17.4	78.8
TL-7-24	.0919	.0743	5.88	10880	60	70	14	19.1	79.1
				10647	59.8	70.6	13.3	19.1	81



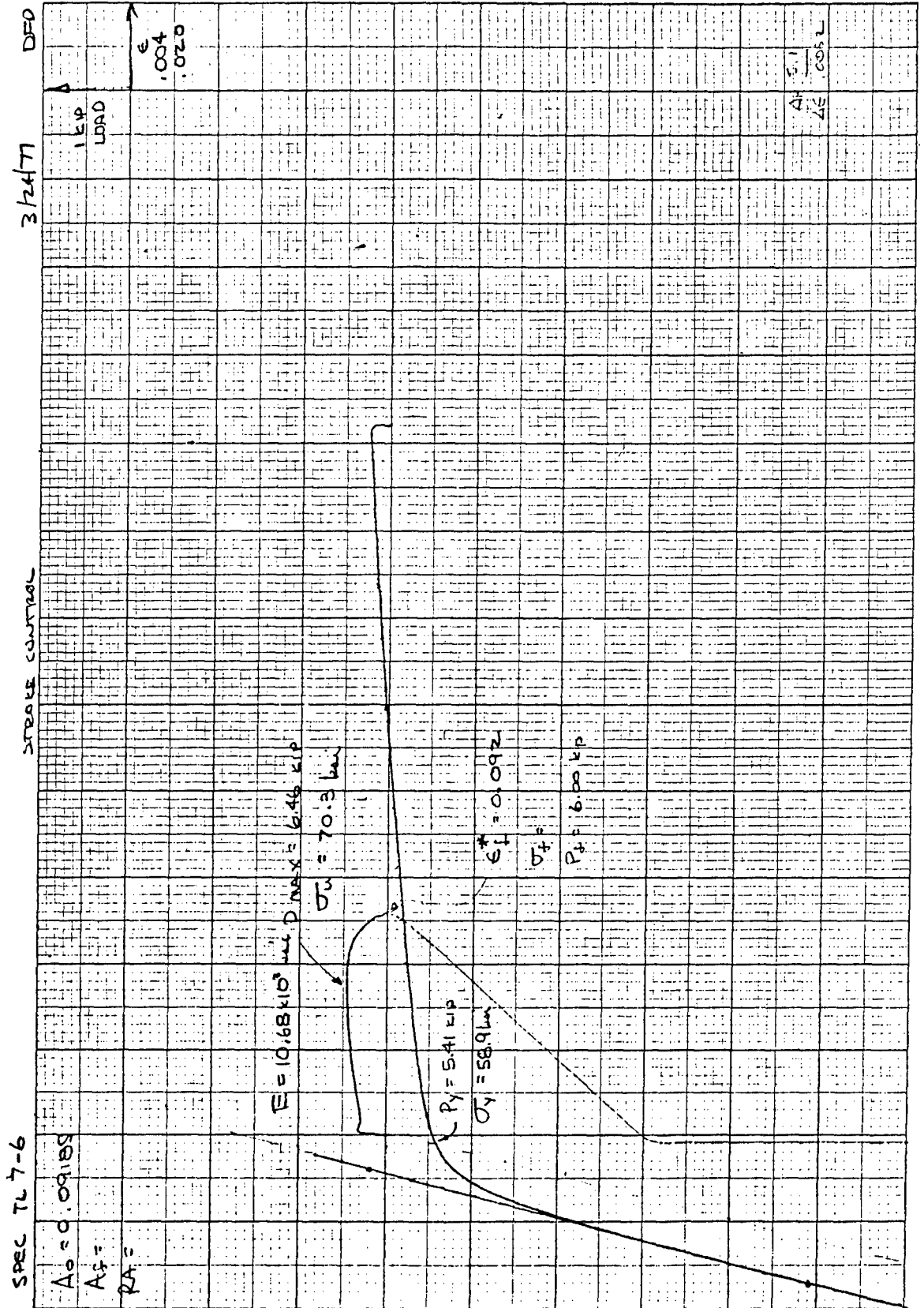
SPEC. # TL-7-S

3/24/77

M6



HEWLETT-PACKARD 82701004



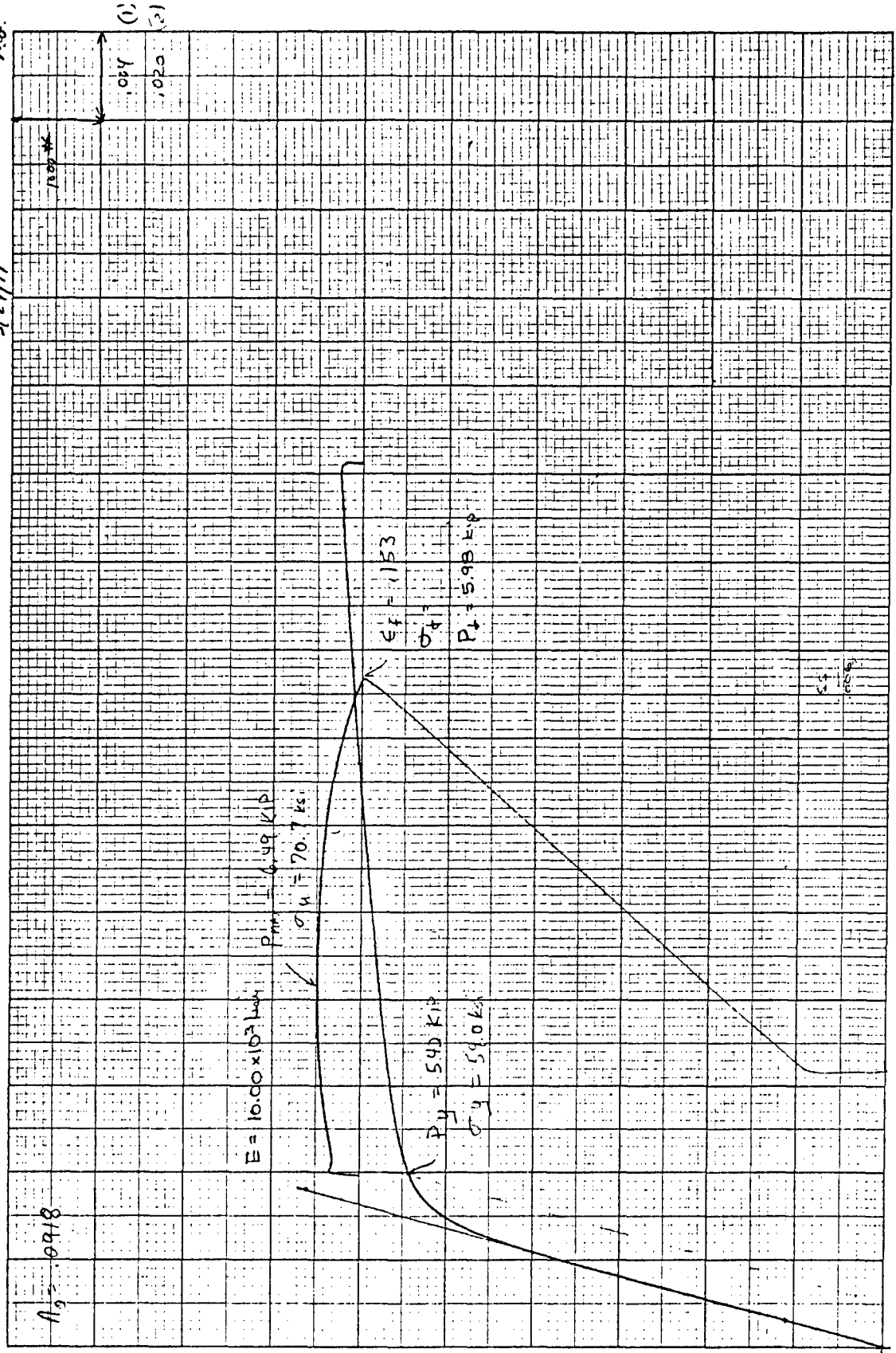


SPEC. TL-7-10

$A_g = 0.918$

3/24/77

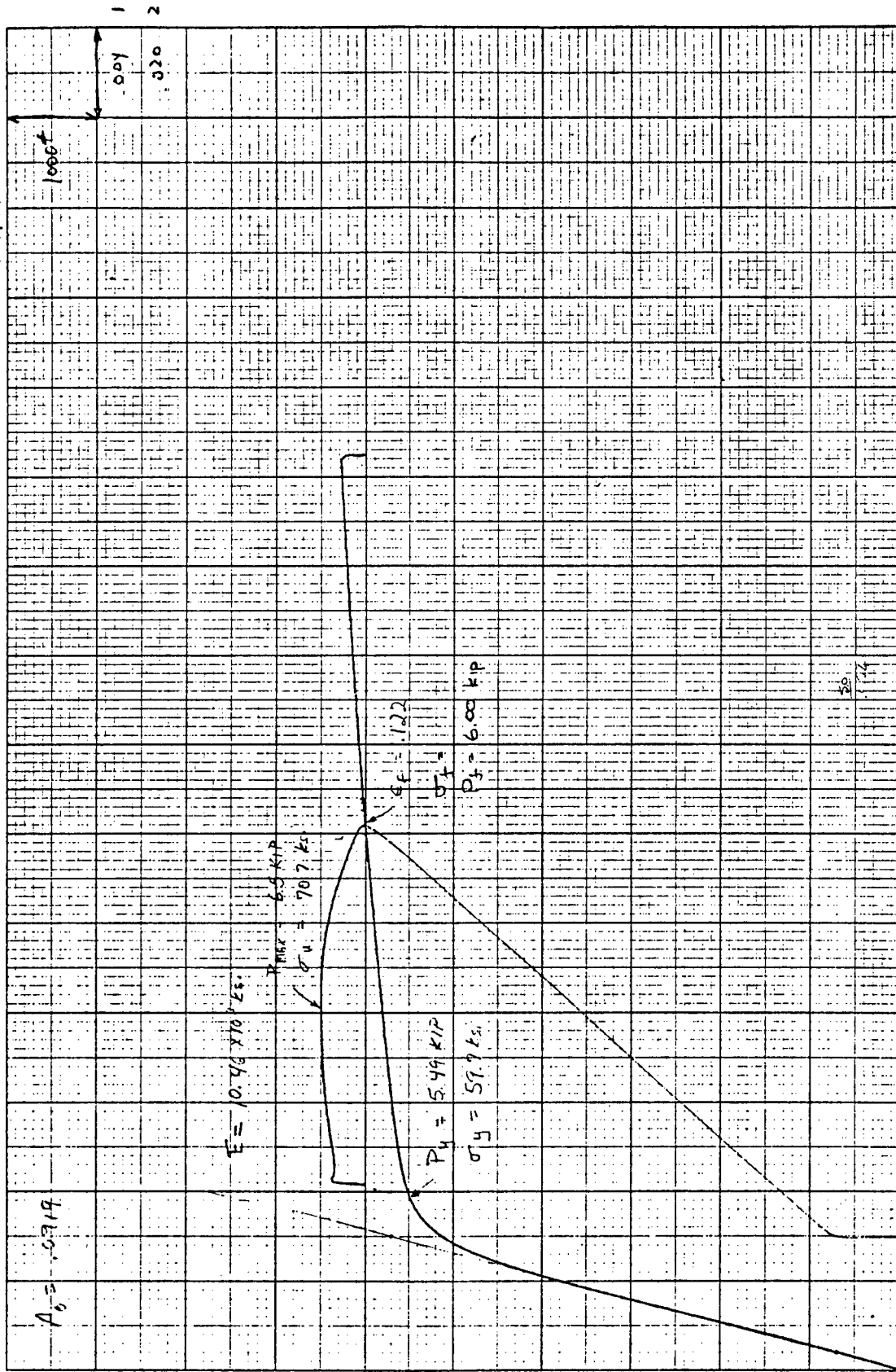
M6.



Spec. TL-7-15

3/24/77

MC

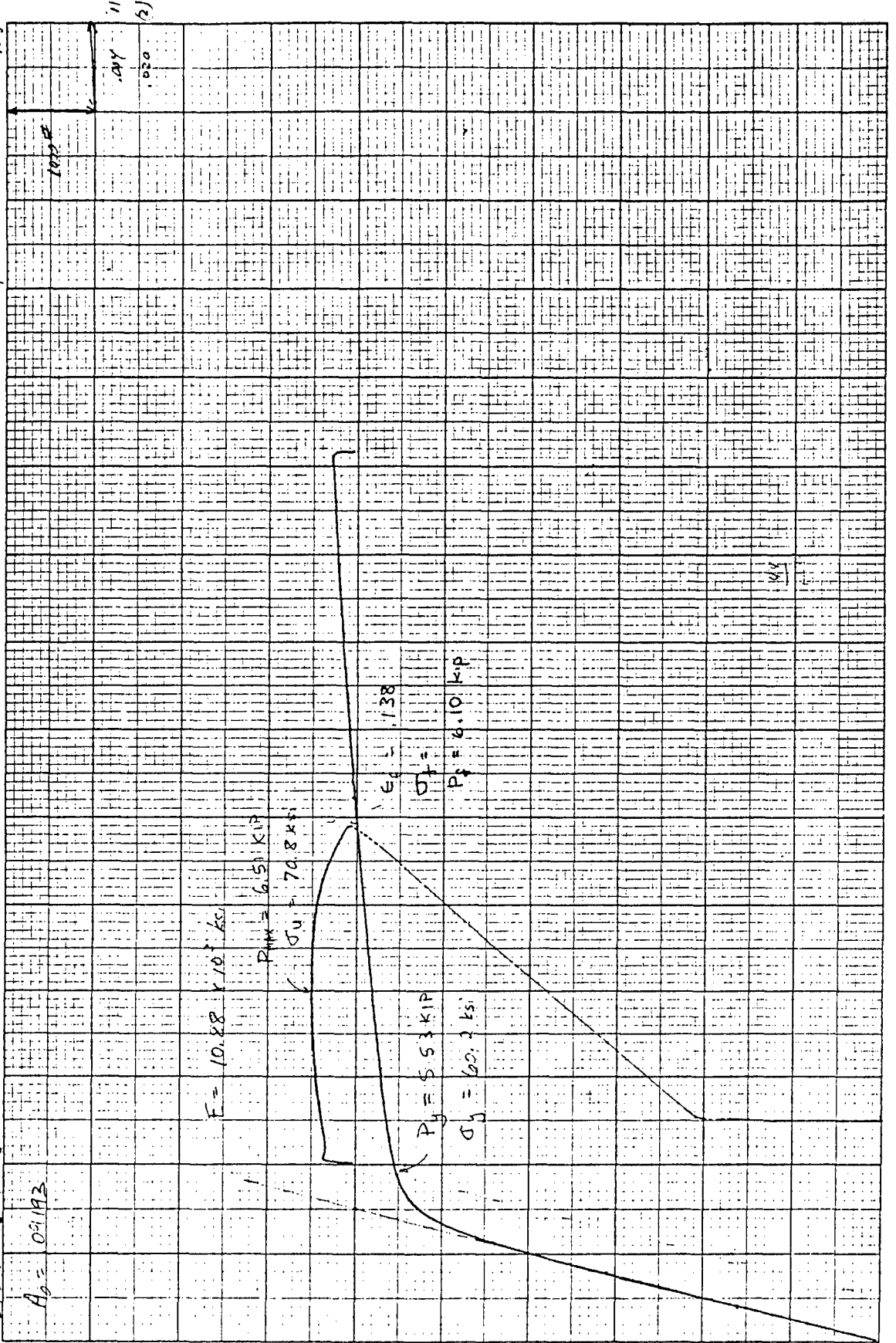


SPEC. TL-7-16

$A_g = 0.193$

3/24/77

116



SPEC. # TL-7-22

$$\lambda_0 = 0.918$$

3/24/77

pic

1000 ft

1  
2  
0.00

$$E = 10.64 \times 10^3 \text{ ksi}$$

$$D_{max} = 6.44 \text{ ksi}$$

$$\sigma_u = 70.2 \text{ ksi}$$

$$\sigma_t^* = 0.09$$

$$\sigma_f = 0.09$$

$$p_L = 6.05 \text{ ksi}$$

$$p_d = 5.55 \text{ ksi}$$

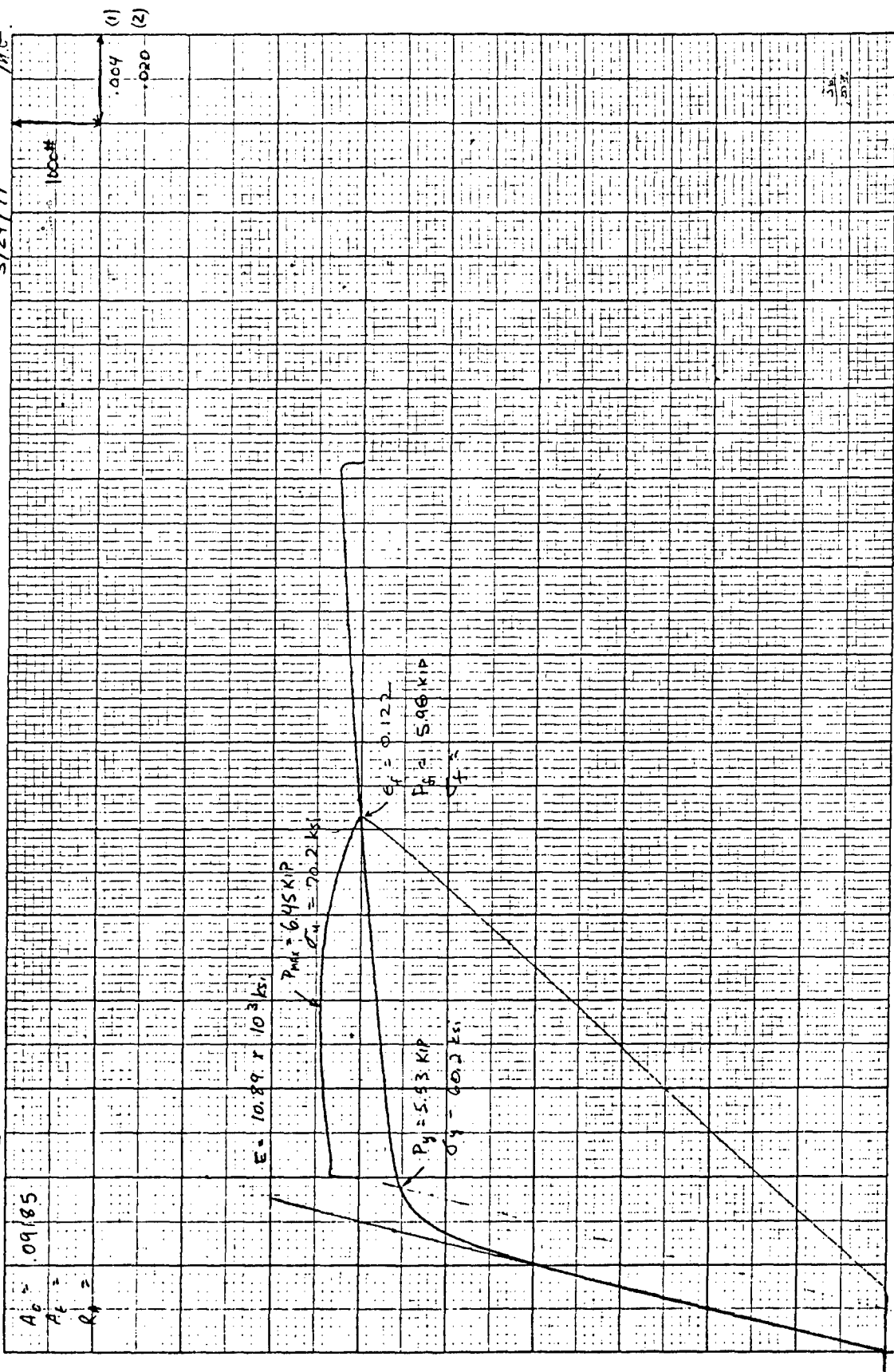
$$\sigma_d = 60.5 \text{ ksi}$$

SPEC. TL-7-23

$A_g = .09185$   
 $A_t =$   
 $R_g =$

3/24/77

116





3/24/77 Mc.

Spec. TL-7-24

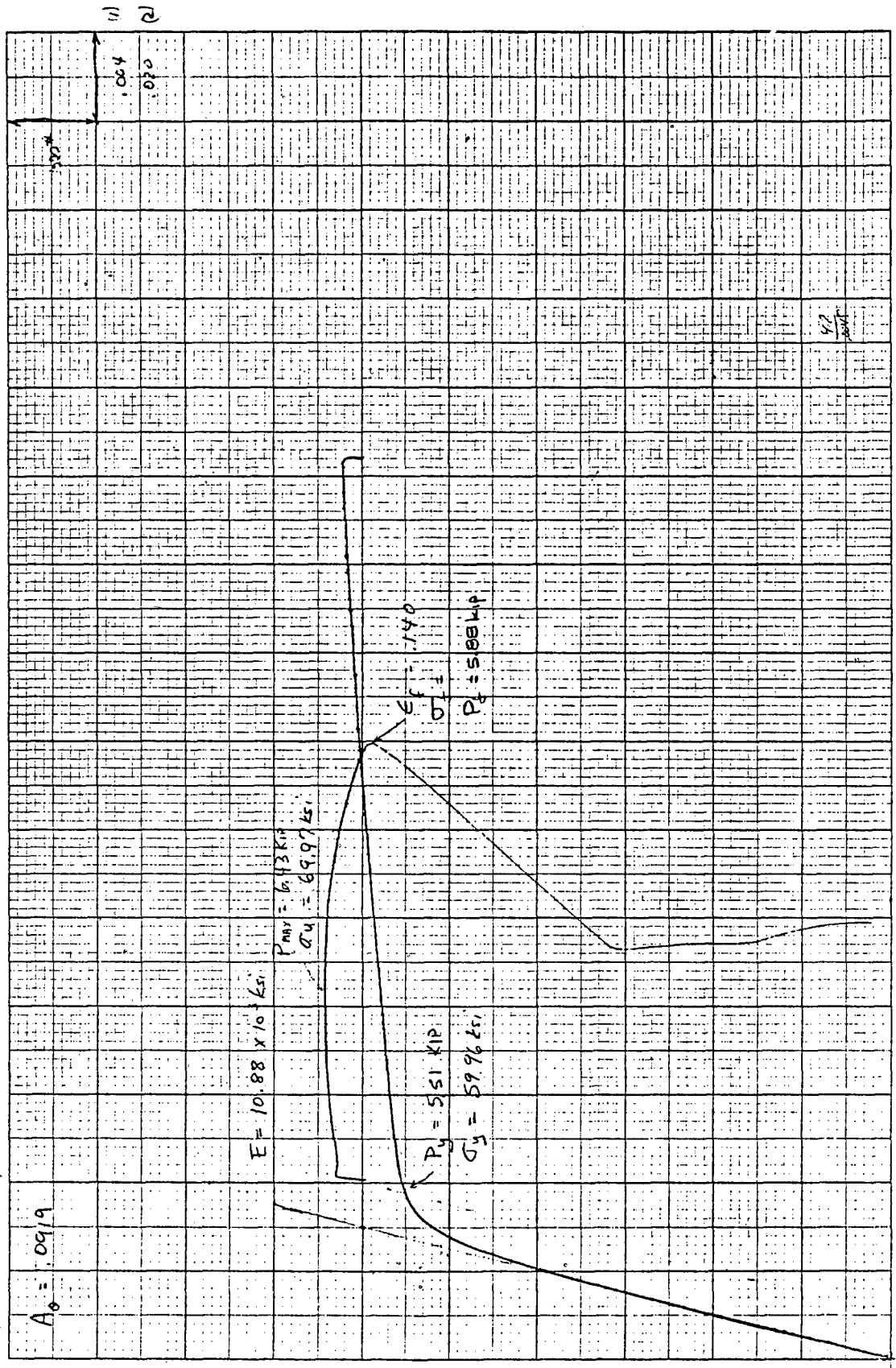


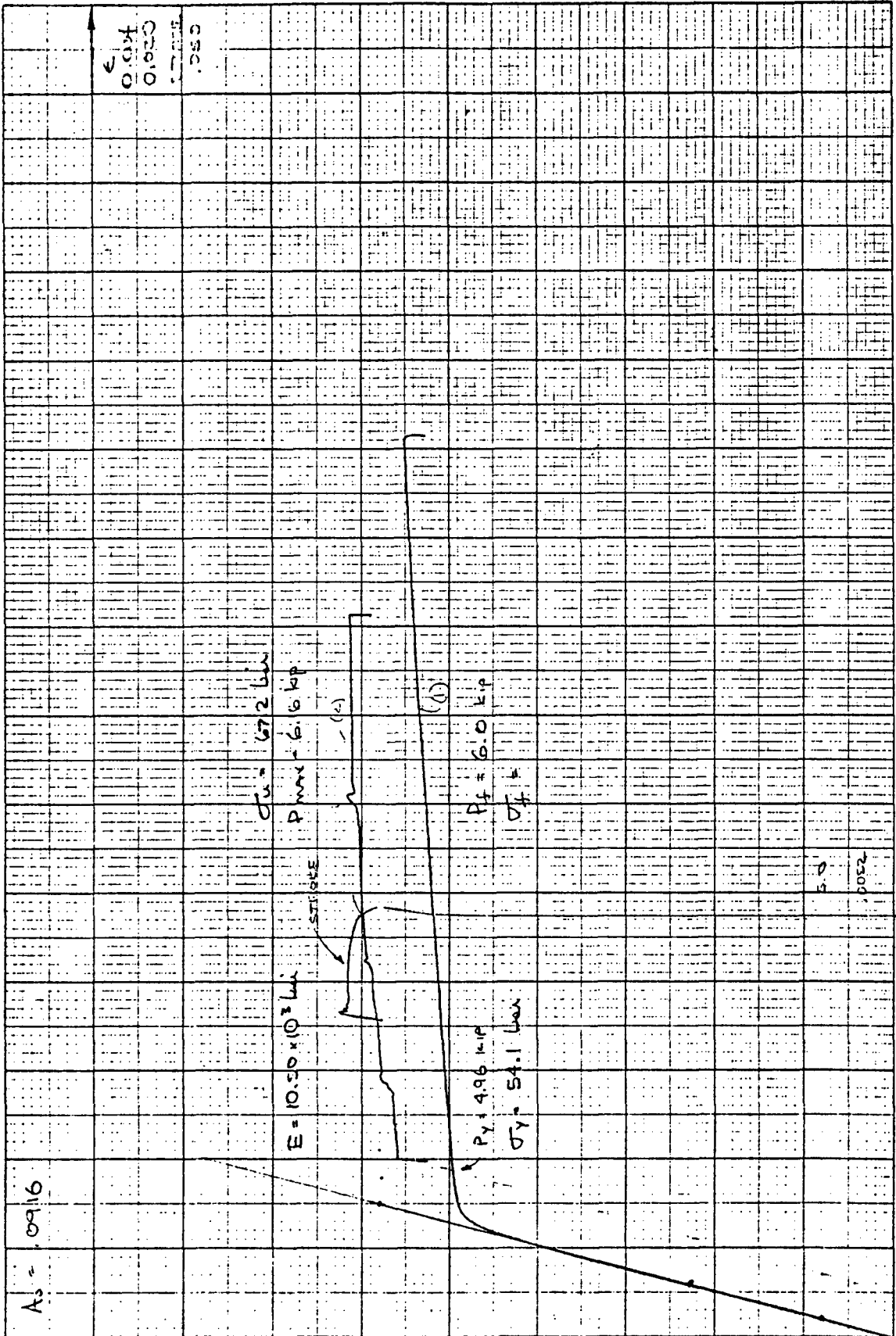
TABLE 9. TENSILE TEST RESULTS FOR 2024-T351 LT  
(STROKE RATE = 0.001 INCH/SEC TEMP = 75F)

SPEC I.D.	INIT AREA IN <sup>2</sup>	FINAL AREA IN <sup>2</sup>	LOAD AT FRACTURE KIPS	ELASTIC MODULUS KSI	YIELD STRESS KSI	ULTIMATE STRESS KSI	ELONG /INCH %	RED AREA %	TRUE STRENGTH KSI
LT-2-4	.0916	.0704	6	10500	54.1	67.2		23.1	85.2
LT-2-5	.09186	.0686	5.98	10470	53.6	66.8		25.3	87.1
LT-2-6	.0921	.0695	6.06	10230	53.1	67.6	20.3	24.5	87.1
LT-2-7	.0922	.0701	5.94	10220	53.6	67.1	17.4	23.9	84.7
LT-2-8	.0919	.0687	6	9670	52.9	68.1	25	25.2	87.3
LT-2-11	.0916	.0694	5.92	10370	53.6	67.4	19.8	24.2	85.3
LT-2-12	.0919	.0676	6.02	10390	52.7	68.3		26.4	89
				10264	53.3	67.5	20.6	24.6	86.5

SEC LT 2-4

A<sub>3</sub> = 0916

3/2/1997



MEC. LT-2-5

3/25/77

A0 = 0.09186

$$E = 10.47 \times 10^3 \text{ ksi}$$

$$P_{max} = 6.14 \text{ kip}$$

$$\sigma_y = 6.62 \text{ ksi}$$

$$\epsilon = .178$$

$$P_y = 4.92 \text{ kip}$$

$$\sigma_y = 53.6 \text{ ksi}$$

$$P_t = 5.98$$

$$\sigma_t = 64.2$$

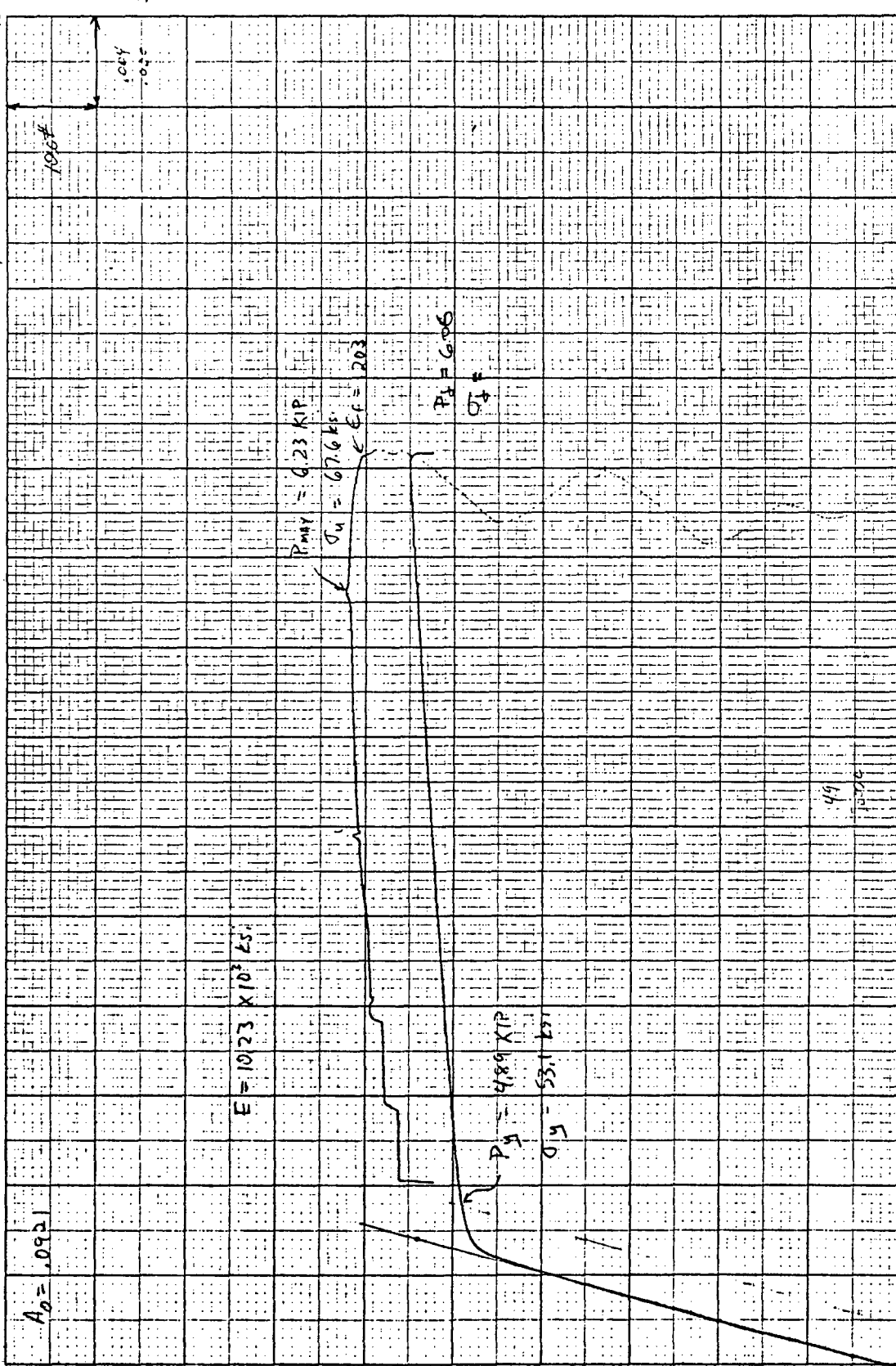
CASE SECTION

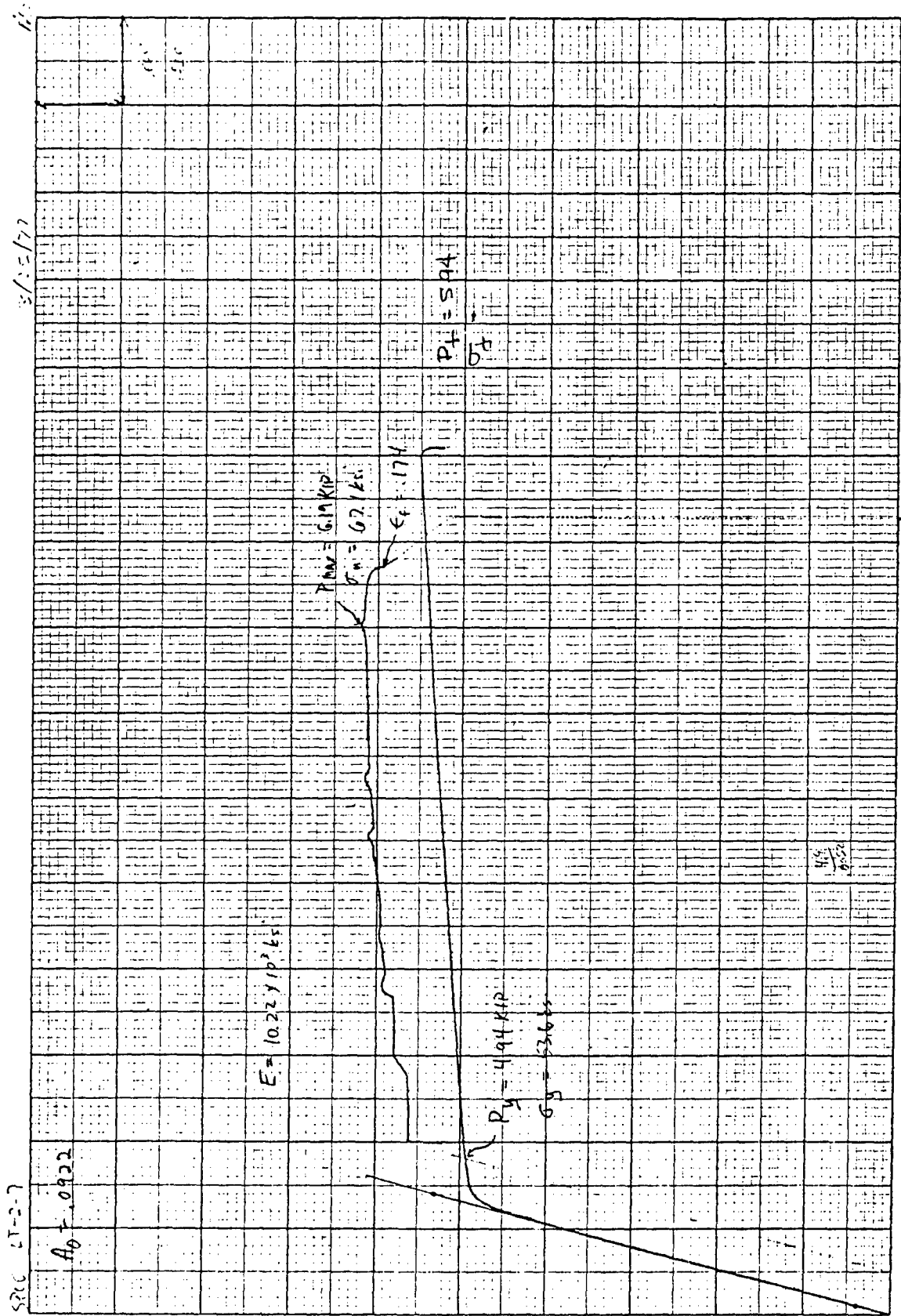
0.5  
100%

SRC. LT-2-6

3/25/77

MG

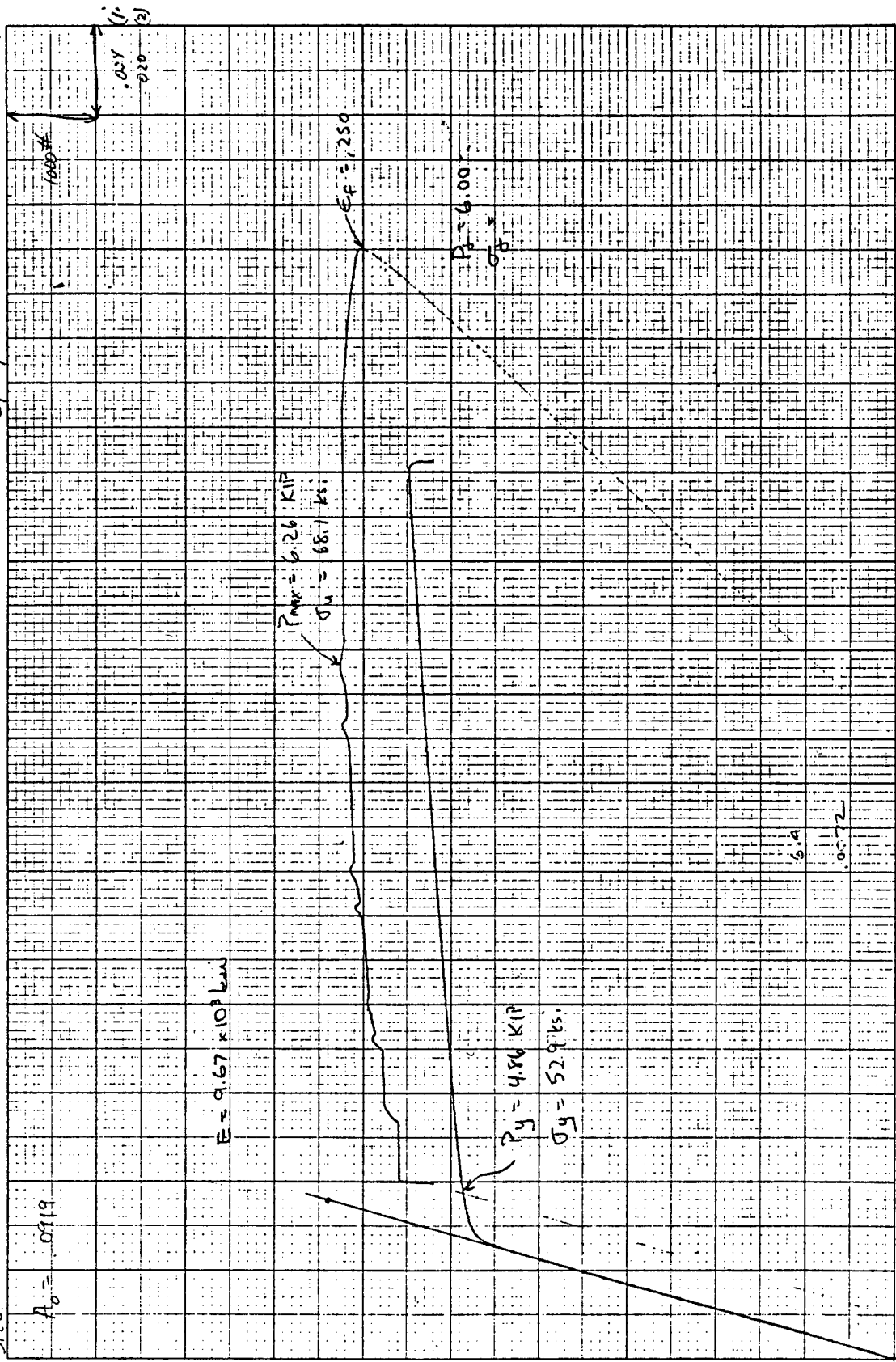




SPEC. LT-2-8

3/25/77

MG



S2C LT-2-11

446

3/25/77

$A_0 = .0916$

$E = 10.37 \times 10^3 \text{ ksi}$

$P_{max} = 6.17 \text{ KIP}$   
 $\sigma_u = 62.4 \text{ ksi}$

$\epsilon_c = .198$

$P_f = 8.92$   
 $\sigma_f =$

$P_y = 1.91 \text{ KIP}$   
 $\sigma_y = 53.6 \text{ ksi}$

$\frac{3.2}{1000}$

(1)  
 .004  
 (2)  
 .020



$$A_0 = 0919$$
$$E = 10.39 \times 10^3 \text{ Ks}$$

$P_y = 4.84 \text{ kip}$

$$\sigma_y = 52.7 \text{ ksi}$$

$\text{MAX: } = 6.28 \text{ kip}$   
 $T_u = 68.3 \text{ kS}$   
 $\epsilon_f^* = 16$

$$P_1 = 6.02$$
$$\frac{1.1.20}{27}$$

3/25/77

2916

12	0.20
11	0.55

TABLE 10. TENSILE TEST RESULTS FOR 2024-T351 TL  
(STROKE RATE = 0.001 INCH/SEC TEMP = 75F)

SPEC I.D.	INIT AREA IN <sup>2</sup>	FINAL AREA IN <sup>2</sup>	LOAD AT FRACTURE KIPS	ELASTIC MODULUS KSI	YIELD STRESS KSI	ULTIMATE STRESS KSI	ELONG /INCH %	RED. AREA %	TRUE FRAC STRENGTH KSI
TL-2-1	.09175	.0725	6.08	10030	46.5	68.4	18.2	20.9	83.8
TL-2-2	.09168	.0729	6.14	10200	46.4	68.7		20.6	84.2
TL-2-3	.09145	.0731	6.14	10250	46.4	68.8		20	83.9
TL-2-9	.09185	.0721	6	10140	45.3	67.3	19.1	21.5	83.2
TL-2-10	.0918	.0727	6.1	10290	46.9	68.5	20.6	20.8	83.9
				10312	46.3	68.3	19.3	20.8	83.8

SPEC. TL-2-1

$$A_0 = .05175$$

$$E = 1000 \times 10^3 \text{ ksi}$$

$$P_{MY} = 628 \text{ kip}$$

$$S_x = 62.4 \text{ ksi}$$

$$\epsilon_f = .182$$

$$P_y = 922 \text{ kip}$$

$$S_y = 6.5 \text{ ksi}$$

$$P_d = 609$$

$$F_d =$$

11/5

3/2/77

$$1000 \text{ #}$$

$$.004$$

$$.020$$

21 sec

3/25/77

1	5
1	5

$$E = 10.20 \text{ eV}$$
$$\sigma_u = 68.7 \text{ ksi}$$

At 6.14

$\rho_D = 4.26 \text{ kg}$   
 $\rho_D = 4.26 \text{ kg}$

5048  
50

SRC. 76-2-3

3/25/50

